

A SECOND COLLECTION OF BIRDS FROM THE PROVINCES OF YUNNAN AND SZECHWAN, CHINA, MADE FOR THE NATIONAL GEOGRAPHIC SOCIETY BY DR. JOSEPH F. ROCK

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INTRODUCTION

After Dr. Joseph F. Rock had rested sufficiently from his explorations in Kansu and Tibet for the Arnold Arboretum,¹ he returned to China to make explorations in the interests of the National Geographic Society. Assembling his outfit and Nashi collectors, he proceeded to Yungning in Yunnan and collected in the vicinity or on near-by mountains early in May, 1928, and then moved north into the semi-independent kingdom of Muli (or Mili) the same month. Doctor Rock had previously visited Muli in 1924,² but this was only a hurried visit and not many birds were collected. Muli is in southwestern Szechwan to the northward of Yungning, Yunnan. The lamasery of Muli is located on the Litang River, but the kingdom is of indefinite extent, and part of it is ruled by native bandits. The country is very mountainous and the mountains very high. To the northwest of Muli lies the unknown snow range of Konka Risonquemba, which rises to a height of 25,000 feet and on which birds were collected at altitudes of 14,000 to 17,000 feet. Doctor Rock had to obtain permission, through the Muli king, from the local bandit that controlled the region, to visit this mountain, to which he made two trips, one in June and another in August. He started to make a third, but the bandit sent him word not to come again at the peril of his life. The remainder of the collection in Muli territory that year was made to the east or northeast of the Muli lamasery, in the Yalung Valley, the Muti Konka Mountains, or on the journey into the country, and the return into Yunnan for the

¹ Bull. Mus. Comp. Zool., vol. 68, pp. 313-381, pls. 1-5, 1928.

² Cf. Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 2, 1926.

winter. No one had ever collected birds in this region before, but the avifauna is much the same as that of northwestern Yunnan, with the exception of a few species that have not been recorded from that Province to date. Doctor Rock returned to Yunnan to spend the winter and to prepare for a journey still farther north in the spring through an unexplored region of Szechwan. While wintering in Yunnan at Ngulukö, on the east slopes of the Likiang Mountains, he had his men collect in the vicinity.

With the return of spring, early in April, 1929, Doctor Rock and his party moved northward into Muli territory again on his way to explore the Minya Konka snow range to the northeast of the Yalung River and south of Tatsienlu. On this journey he went as far as Tatsienlu, which was reached some time in May. After a couple of weeks' rest there, he returned to the Yulonghsi Valley, south of Tatsienlu, and went eastward to explore the Minya Konka Range, the highest peak of which reaches a height of 25,600 feet, with several others almost as high. To the westward of the Minya Konka Range there is another high parallel chain some 20,000 feet in height, and it is this ridge that is visible from the mountains to the westward of Tatsienlu and not the Minya Konka.³

The party then started the return journey by a route to the westward of the one pursued on the northward march, crossing the Yalung at Baurong in July, and were back in Yunnan by August.

When the expedition reached Yungning on the return journey, Doctor Rock found all the ferries across the Yangtze River destroyed by rebels, and the party was marooned for two months on an island in Yungning Lake, but he managed to send some of his men to collect in the northwest corner of Yunnan in August, where they started operations in the Luddü Mountains west of the Yangtze; they then moved northward to the Fuchuanshan, between the Mekong and the Salween, in September; to Weihsi, between the Mekong and Yangtze, the same month; and during October collected at two stations on Ndamucho, on the divide between the Yangtze and Mekong, south of Lüitien, at 11,000 and 14,000 feet. Being threatened by Konkaling bandits from the northwest and rebel forces from the south, the party at Yungning Lake found themselves in a precarious position. Doctor Rock appealed to a friendly Mongol chief for aid, and the chief sent a number of his best swimmers with a lot of goatskins. These were inflated to form rafts, and the party managed to cross under great difficulties without losing any of its valuable collections and to reach its base again at Ngulukö, on the east slopes of the Likiang Mountains. Doctor Rock's men collected some birds here

³ See *Nat. Geog. Mag.*, vol. 58, pp. 385-437, 1930, many illustrations and a small map of the route; and vol. 60, pp. 1-65, 1931.

in November, 1929, and some in January, 1930. This was the last collecting done, and Doctor Rock was soon able to leave the country for the United States.

On the whole journey the expedition collected something more than 1,700 birds, in addition to a very large number of botanical specimens. These have been generously presented to the United States National Museum by the National Geographic Society. Quite a number of the forms involved were not before represented in the National Museum collection. The study of this collection has enabled me to describe the following five birds:

Columba rupestris austrina;
Garrulax albogularis eous;
Dryonastes berthemyi ricinus;
Fulvetta insperata;
Spelaeornis rocki.

A number of other specimens represent extensions of ranges of previously known forms. The collection as at present worked out consists of 254 forms. Doctor Rock was the first Caucasian to explore much of the country under consideration. Nevertheless, while his explorations were still in progress, the well-known collector Henry Stevens passed through Muli on his way to Tatsienlu and traversed part of the country previously covered by Doctor Rock. He has published a short sketch of his route.⁴

Doctor Rock is preparing an account of his travels for the National Geographic Society and a map of the country, but as he has returned to China to do the work neither is available to me in preparing this report. The only data at hand are the list of localities and the specimens and the article on the Minya Konka previously mentioned.

LOCALITIES WHERE BIRDS WERE COLLECTED

The list of localities is given below as it may prove useful in the future. The altitudes are only the heights at which birds were collected and may or may not be the summit of a ridge or mountain. They are arranged alphabetically for ready reference.

Aloching: 12,500–13,500 feet, north of Kulu, Szechwan, April, 1929.

Barongomba (or Petien): One day northeast of Baurong in Ngunze Kong Valley, east of the Yalung, 11,000–12,000 feet, Szechwan. No date. [1929.]

Baude-Shaya: Northeast of Muli, Szechwan, July, 1928.

Baurong: 7,600 feet, on the Yalung, Szechwan, July, 1929.

Bonti or vicinity: East of Waerhdje, 12,000–14,500 feet, Muli, Szechwan, July, 1928.

Brüolo-kong Valley: North of Druduron Pass in Chiu-lung-hsien territory, east of the Yalung, 13,000–15,900 feet, May, 1929. Chiu-lung-hsien is an 8 days' trip southwest of Tatsienlu, Szechwan.

⁴ Bull. Brit. Orn. Club, vol. 50, pp. 46–54, 1930.

- Chengtze: North of the Chiprinla and south of Mudju and Yulonghsi, 14,500–15,900 feet, Szechwan, May, 1929. Chengtze is 5 days' trip south of Tatsienlu.
- Chide: 14,500 feet, east of Muli, Szechwan, July, 1928.
- Chinhaitze: 11,000–11,300 feet, northwest Yunnan, May, 1928.
- Chiprinla: 16,500 feet, north of Chiu-lung-hsien and Chüchulongba, Szechwan, July, 1929.
- Chiu-lung-hsien territory: East of the Yalung, 8 days' trip southwest of Tatsienlu (halfway between Muli and Tatsienlu), May, 1929.
- Chüchulongba: A valley north of the hamlet of Tanku in Chiu-lung-hsien territory, 13,000–14,000 feet, Szechwan. No date. [1929.]
- Chütien: On the west bank of the Yangtze north of Shiku, 6,500 feet, northwest Yunnan, October, 1929.
- Djago: Between Muli and Kulu lamaseries, 10,000–12,000 feet, Szechwan, April, 1929.
- Djishi: Northeast of Muli, Yalung, 11,000–13,000 feet, July, 1928.
- Djishigotong: 12,500–13,000 feet, Muli, July, 1928.
- Djobi: 12,000 feet, Muli, Szechwan, July, 1928.
- Dshizhi: North of Aloching and Kulu, but west of the Yalung, 11,000–13,500 feet, April, 1929.
- Dzampe: Grassland in Muli territory, west of the Yalung River, 14,000 feet, July, 1929.
- Fuchuanshan: Mekong-Salween divide, 9,800–12,000 feet, Yunnan, September, 1929.
- Fungkou: 6,500–9,000 feet, Yunnan, May, 1928.
- Gauwua (or Gawua): South of Yowabu Pass in Yungning territory, 11,000–11,500 feet, Yunnan, April, 1929.
- Gibboh, Mount: 12,500–14,000 feet, south of Muli lamasery, August, 1928; April, 1929. Mount Gibboh is a huge limestone range over which a pass leads from Yunnan into Muli territory, Szechwan.
- Gou-khü-ko: 13,000 feet, Yangtze loop, Yunnan, April, 1929.
- Gowa (forests of): 10,000 feet, south of Yulo, Yunnan, May, 1928.
- Jesila: 15,600–16,300 feet, pass across the Minya Konka snow range, 3 days' trip south of Tatsienlu, May, 1929.
- Jesilongba Valley: 14,300–16,000 feet, north of Yulonghsi and the Jesila, 2 days' trip south of Tatsienlu and near the Minya snow range, Szechwan, May, 1929.
- Kere: South of Kulu, 9,000 feet, Muli, December, 1928.
- Konka, Mount: Muli, 14,000–17,000 feet, June and August, 1928.
- Konkalongba: 14,500 feet, Minya snow range, east of Yulonghsi, Szechwan. No date. [1929.]
- Kopati (forests of): Muli, June, 1928.
- Kulu Mountains: East of Muli, 11,000–13,000 feet, December, 1928, and April, 1929.
- Laitsolo (gorges of): 10,000 feet, northwest Yunnan, November, 1928.
- Lapo-laze: 9,000–10,000 feet, Yunnan, May, 1928.
- Lauch: Upper slopes of Fuchuanshan, 10,000–12,000 feet, Yunnan, September, 1929.
- Lautsolö Gorge: West of the Yangtze River, in Likiang territory, 9,000 feet, Yunnan, April, 1929.
- Likiang Mountains: 9,400–15,000 feet, Yunnan, September–October, 1928; January–February, 1929; and January, 1930.
- Luddü Mountains: West of the Yangtze and Chungtien Rivers, 12,000–13,000 feet, northwest Yunnan, August, 1929.

- Lütien: West of the Yangtze and east of the Mekong, 10,000 feet, northwest Yunnan, September, 1929.
- Mbayiwua: North of Likiang in the Yangtze loop, 10,000 feet, Yunnan, April, 1929.
- Mitzuga, Mount: 10,000–15,600 feet, Muli, June, 1928.
- Mudju: Between Chengtze and Yulonghsi, 11,000 feet, Szechwan, June, 1929. Beyond Mudju are grasslands until one has crossed the Jesila over the Minya Range to the central part of Jesilongba, where the tree growth again occurs.
- Muli Mountains: 9,000–10,000 feet, May–June, 1928; April, 1929.
- Muli Valley: 9,500–10,000 feet, May and June, 1928.
- Mundon: East of the Yalung, overlooking the Yalung Gorge, 13,000 feet, border of Muli and Chiu-lung-hsien territory, Szechwan, May, 1929.
- Mutirong: In the Yalung Gorge, Muli, 7,000–7,800 feet, April, 1929.
- Ndamucho: South of Lütien and west of the Yangtze River on the Mekong-Yangtze divide, 11,000 and 14,000 feet, Yunnan, October, 1929.
- Ngulukö: Eastern slopes of the Likiang Mountains, 9,600 feet, Yunnan, November, 1929.
- Noön: Valley east of Muli, 10,500–11,000 feet, August, 1928.
- Peshui River: Eastern slopes of Likiang Mountains, 11,000 feet, Yunnan, March, 1929.
- Petien: See Barongomba.
- Raronki: Northeast of Muli, 12,400–14,200 feet, August, 1928.
- Ronapien region: Shouchu Basin, Muli, 14,500 feet, August, 1928.
- Shangentze: South foot of the Druduron Pass, Tatsienlu territory, 14,500 feet, Szechwan, May, 1929.
- Shaya: Northeast of Muli, July, 1928.
- Shelän Forests: Between Muli and Kulu lamaseries, Muli, 13,400 feet, April, 1929.
- Shenlä Valley: 12,000 feet, Kulu-Djago, Muli, December, 1928.
- Shintsang: West of Weihsi and east of the Mekong, 11,000 feet, Yunnan, September, 1929.
- Shouchu Valley: 11,300–12,000 feet, Muli, August, 1928.
- Tatsienlu: 9,500–10,000 feet, Szechwan, May, 1929.
- Tokesher Forest: 10,000 feet, Yunnan, May, 1928.
- Tsoso (between Tsoso and Kulu): 10,500 feet, Muli, December, 1928. I do not know whether this is north or south of Kulu, but it is not far from the latter.
- Tyon-kong Forests: 12,000 feet, Muli, July, 1928.
- Vudju Mountains: 10,000 feet, south of Muli, May, 1928, and April, 1929.
- Waerhdje, or vicinity: 14,000–15,000 feet, Muli, July and August, 1928.
- Watogomba: 12,500–14,000 feet, Yalung watershed, Muli, July, 1928.
- Weihsi: West of the Yangtze River, 8,000–9,000 feet, northwest Yunnan, September, 1929.
- Wenronkong: East of Dzanpiran Pass in Muli territory, east of the Yalung, 14,500 feet, April–May, 1929.
- Yalung River Gorge: 11,000–12,500 feet, Muli, July, 1928.
- Yankongran Pass: North of Kulu, Muli, 15,500 feet, July, 1929.
- Yanwekong Valley: East of the Yalung and north of Wanzanron, a pass that forms the Muli and Chiu-lung-hsien border, 10,000–12,000 feet, May, 1929.
- Yetsi Valley: North of Kulu (one day), 12,000 feet, Muli, April, 1929.
- Yuli Forest: 13,000 feet, Yunnan, May, 1928.

Yulinggong: 11,000 feet, in the Jesilongba Valley, 10 miles south of Tatsienlu, May, 1929. This evidently is the same locality visited by the Rev. David C. Graham in 1923, who spelled the name "Ü Long Kong."⁵

Yulo: West of the Likiang Mountains, 7,000 feet, Yunnan, August, 1929.

Yulonghsi Valley: Tatsienlu territory, 13,000-16,000 feet, May, 1929. Grasslands resembling very much the grasslands of eastern Tibet and extreme western Kansu. Yulonghsi is separated from the Minya Konka snow range by a high, grassy, rock-crowned spur but lies parallel to the snow range. It is 3 or 4 days' trip south of Tatsienlu and south of Jesila, the pass across the northern end of the Minya Range.

Yungning: City and prefecture, in northwest Yunnan near the Szechwan border. Doctor Rock's men collected on the plain, in the mountains, and on the lake, at 9,000 to 13,000 feet, May, November, and December, 1928, and January, 1929.

Zimi Valley: West of Waerhdje, Muli, 14,000-15,000 feet, August, 1928.

Family COLYMBIDAE, Grebes

1. PROCTOPUS NIGRICOLLIS NIGRICOLLIS (Brehm)

Podiceps nigricollis BREHM, Handbuch der Naturgeschichte aller Vögel Deutschlands, p. 963, 1831 (Germany).

One male, Yungning Lake, 9,000 feet, Yunnan, December.

2. POLIOCEPHALUS RUFICOLLIS POGGEI (Reichenow)

Podiceps nigricans poggei REICHENOW, Journ. f. Orn., 1902, p. 125 (Tschili, China).

Two males, Yungning Lake, 9,300-13,000 feet, Yunnan, May and November-December.

The specimen taken in winter is considerably larger than the one taken in May, especially the bill.

Family PHALACROCORACIDAE, Cormorants

3. PHALACROCORAX CARBO SINENSIS (Shaw and Nodder)

Pelecanus sinensis SHAW and NODDER, The naturalist's miscellany, vol. 13, pl. 529, text, 1801 (China).

One female, Yungning Lake, 9,500 feet, Yunnan, December.

Family ARDEIDAE, Herons

4. ARDEOLA BACCHUS (Bonaparte)

Buphus bacchus BONAPARTE, Conspectus generum avium, vol. 2, p. 127, 1855 (Malay Peninsula).

One immature female, northwest Yunnan (Weihsi, 8,000-9,000 feet, September); one adult male and one adult female, southwest Szechwan (Mutirong, 7,000-7,800 feet, Muli, April; Yanwekong, 10,700 feet, May).

⁵ See Auk, vol. 42, p. 423, 1925.

5. *BUBULCUS IBIS COROMANDUS* (Boddaert)

Cancroma coromanda BODDAERT, Table des planches enluminées d'histoire naturelle de M. d'Aubenton, p. 54, 1783 (Coromandel).

One female, Tatsienlu, 9,500–10,000 feet, Szechwan, May.

Family CICONIIDAE, Storks

6. *CICONIA NIGRA* (Linnaeus)

Ardea nigra LINNAEUS, Systema naturae, ed. 10, p. 142, 1758 (North Europe).

One female immature, Yungning Plain, 9,500 feet, Yunnan, November–December.

Family ANATIDAE, Ducks, Geese, Swans

7. *MERGUS MERGANSER ORIENTALIS* Gould

Mergus orientalis GOULD, Proc. Zool. Soc. London, 1845, p. 1 (Amoy, China).

One female, Yungning Plain, 10,000 feet, Yunnan, November–December. The culmen measures 44.5 mm.

8. *CASARCA FERRUGINEA* (Pallas)

Anas ferruginea PALLAS, Vroeg's catalogue, Adumbratiuncula, p. 5, 1764, (Tartary).

One adult female, Chide, east of Muli, 14,500 feet, Szechwan, July.

9. *NYROCA FULIGULA* (Linnaeus)

Anas fuligula LINNAEUS, Systema naturae, ed. 10, p. 128, 1758 (Sweden).

One adult male, Yungning Lake, 9,500 feet, Yunnan, December.

10. *NYROCA NYROCA NYROCA* (Güldenstädt)

Anas nyroca GÜLDENSTÄDT, Novi Comm. Acad. Sci. Imp. Petropolitanae, vol. 14, pt. 1, p. 403, 1770 (South Russia).

Two males and one female, Yungning Lake, 9,300 feet, May; one female, Weihsi, 8,000–9,000 feet, September, Yunnan.

11. *DAFILA ACUTA ACUTA* (Linnaeus)

Anas acuta LINNAEUS, Systema naturae, ed. 10, p. 126, 1758 (Sweden).

One male, Weihsi, 8,000–9,000 feet, Yunnan, September.

This is just beginning to molt from the eclipse into the winter plumage.

12. *QUERQUEDULA QUERQUEDULA* (Linnaeus)

Anas querquedula LINNAEUS, Systema naturae, ed. 10, p. 126, 1758 (Sweden).

Two females, Weihsi, 8,000–9,000 feet, Yunnan, September.

13. NETTION CRECCA CRECCA (Linnaeus)

Anas crecca LINNAEUS, Systema naturae, ed. 10, p. 125, 1758 (Sweden).

Three males, Weihsi, 8,000–9,000 feet, Yunnan, September.

14. ANAS PLATYRHYNCHA PLATYRHYNCHA Linnaeus

Anas platyrhynchos LINNAEUS, Systema naturae, ed. 10, p. 125, 1758 (Sweden).

One adult female, Yungning Lake, 9,300 feet, Yunnan, May; one adult male and one adult female, Dshizhi, 12,000 feet, southwest Szechwan, April.

Family ACCIPITRIDAE, Hawks, Ospreys, etc.

15. ACCIPITER NISUS NISOSIMILIS (Tickell)

Falco nisosimilis TICKELL, Journ. Asiat. Soc. Bengal, vol. 2, p. 571, 1833 (Borabhum, Bengal).

One adult male (marked female), Likiang Mountains, Yunnan, October.

This specimen has the barring below much narrower than the typical European bird, and above it is somewhat darker. The wing measures 217 mm.

16. ACCIPITER NISUS MELANOSCHISTUS Hume

Accipiter melanoschistus HUME, Ibis, 1869, p. 350 (Kotegart, northwest India).

One subadult female, Likiang Mountains, Yunnan, September.

This specimen is not fully adult or at least has not acquired fully adult plumage. It is blackish brown above; below the bars are broad and blackish. Compared with the typical European race in the same stage of plumage, it is much darker above and the barring below is heavier. It evidently belongs to the resident breeding form. The wing measures 246 mm.

17. MILVUS LINEATUS (Gray)

Haliaeetus lineatus GRAY, Illustrations of Indian zoology chiefly selected from the collection of Major General Hardwicke, vol. 1, pl. 18, p. 1, 1832 (China).

One male, Likiang Mountains, 10,000 feet, January–February.

Family FALCONIDAE, Falcons

18. CERCHNEIS TINNUNCULUS INTERSTINCTUS (McClelland)

Falco interstinctus MCCLELLAND, Proc. Zool. Soc. London, 1839, p. 154 (Assam).

Two females, Likiang Mountains, October.

The two above specimens belong to the pale migrant race of this falcon.

19. CERCHNEIS TINNUNCULUS SATURATUS (Blyth)

Falco saturatus BLYTH, Journ. Asiat. Soc. Bengal, vol. 28, p. 277, 1859 (Tenasserim).

Two females, Likiang Mountains, Yunnan, October; three females, southwest Szechwan (Dzeru, Shouchu Valley, 11,300 feet, August, and Mutirong, 7,000–7,800 feet, Muli, April).

This is the dark resident race of this falcon that I formerly called *Cerchneis tinnunculus interstinctus*,⁶ following earlier authors.

20. FALCO REGULUS LYMANI Bangs

Falco aesalon lymani BANGS, Bull. Mus. Comp. Zoöl., vol. 54, p. 465, 1912 (Tchegan-Burgazi Pass, Altai).

One female, Yungning Mountains, 12,000–13,000 feet, November–December.

This specimen agrees with a female from the original typical series, except the streaks below are a little broader.

Family TETRAONIDAE, Grouse

21. TETRASTES SEWERZOWI SECUNDA Riley

Tetrastes sewerzowi secunda Riley, Auk, vol. 42, p. 423, 1925 (near Tatsienlu, Szechwan).

One adult female and three young, Ronapien region, Shouchu Basin, 14,500 feet, August.

The young are just changing from the down into the first postnatal plumage and are probably not more than 2 weeks old at the most. Though the collector assigns all three of the above young to the adult, in my opinion he is in grievous error. One of the young belongs to the adult; the other two have a different color pattern, the tails about an inch long are brick red with a subterminal black spot and buffy tip; the tarsi are unfeathered. I would suggest they belong to *Perdix hodgsoniae sifanica*.

Family PHASIANIDAE, Pheasants

22. PERDIX HODGSONIAE SIFANICA Przewalski

Perdix sifanica PRZEWALSKI, Mongol i strana Tangut, vol. 2, p. 124, 1876 (mountains of Kansu); Rowley's Ornithological miscellany, vol. 2, p. 423, 1877.

Two males and six females, southwest Szechwan (Mount Konka, 15,700 feet, August; Yulonghsi Valley, 13,000–16,000 feet, May; Jesilongba Valley, 14,300 feet, June).

The undoubted males, taken in the breeding season, have a bare space below the eye and extending back of the eye over the ear cov-

⁶ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 11, 1926.

erts; below the eye, separated from the subocular bare space by a narrow line of feathers, there is another bare space, and this second bare space contains some small wartlike structures, still red in the skin, and evidently in life capable of being inflated. According to the sexing of the collectors, both sexes have this inflatable skin, but the sexing of Rock's men is very unreliable and not to be trusted. I have no good seasonable material for comparison.

23. *ITHAGINIS CRUENTUS GEOFFROYI* Verreaux

Ithaginis geoffroyi VERREAUX, Bull. Soc. d'Acclim., ser. 2, vol. 4, p. 706, 1867 (Mupin).

Fourteen males and twelve females, southwest Szechwan (Mount Mitzuga, 12,500–14,500 feet, June; Bonti, east of Waerhdje, 14,500 feet, July; forests of Raronki, 12,500 feet, Shouchu Basin, August; Aloching, 12,500–13,500 feet, April; Dshizhi, 13,500 feet, April; Wenronkong, 14,500 feet, Muli, April–May; Mundon, 13,000 feet, May; Shangentze, 14,500 feet, May; Jesilongba, 14,500–16,000 feet, May; Chengtze, 14,500–15,900 feet, south of Tatsienlu, May).

The present form and *Ithaginis c. clarkei* are very much alike; the only constant difference in a series of both forms appears to be the blackish or dark mouse-gray chin of *geoffroyi*, this part in *clarkei* being buffy tinged with a reddish wash. There are a number of average characters separating the two forms, however. The females appear to be indistinguishable. The ranges of the two forms are very close to each other in this region, apparently only separated by the valley of the Yangtze.

Along with the rough skeletons sent in by the Rev. David C. Graham from the Yulonghsi Gorge (written Ülongsi by Graham) there are two immature males, about half grown, taken August 9. They have already begun to assume the red under tail coverts and green of the adult plumage, while the tarsi are still small and delicate and the bills small and red. This seems to indicate that the adult plumage of the male is assumed some time before adult growth is reached and explains the difference in size between *Ithaginis wilsoni* Thayer and Bangs and *geoffroyi*, and the reason the two were both found on Washan.

24. *ITHAGINIS CRUENTUS CLARKEI* Rothschild

Ithaginis clarkei ROTHSCHILD, Bull. Brit. Orn. Club, vol. 40, p. 67, 1920 (Likiang Mountains, Yunnan).

One male, Likiang Mountains, 12,500 feet, Yunnan, January.

25. *LERWA LERWA MAJOR* Meinertzhagen

Lerwa lerwa major MEINERTZHAGEN, Bull. Brit. Orn. Club, vol. 47, p. 101, 1927 (Tatsienlu, Szechwan).

One male, Likiang Mountains, 15,000 feet, Yunnan, January.

I have no typical Szechwan birds for comparison, and only two old specimens of *Lerwa lerwa lerwa* from the "Himalayas." From the latter the Yunnan specimen differs as follows: Above, the light crossbars are lighter and on the head white rather than buffy; the primaries are black rather than brownish black; the chestnut of the lower parts is somewhat deeper; the bill is larger.

This seems to be a new record for Yunnan.

26. PUCRASIA MEYERI Madarász

Pucrasia meyeri MADARÁSZ, Ibis, 1886, p. 145 (central Tibet).

One male and one female, Likiang Mountains, 15,000 feet, January.

These are the first specimens of this fine species received by the United States National Museum.

27. TETRAOPHISIS SZECHENYII Madarász

Tetraophasis szechenyii MADARÁSZ, Zeitschr. ges. Orn., vol. 2, p. 50, pl. 2, 1885 (East Tibet).

Two males and one female, northwest Yunnan (Likiang Mountains, 14,000 feet, January); five males and five females, southwest Szechwan (Mount Mitzuga, 13,000–14,500 feet, Muli, June; forests of Bonti, east of Waerhdje, 14,000 feet, July; Kulu Mountains, 12,000–13,000 feet, April; Aloching, 12,500–13,500 feet, north of Kulu, April; Minya Mountains, Konkalongba, 14,500 feet, no date).

28. TETRAOGALLUS TIBETANUS HENRICI Oustalet

Tetraogallus henrici OUSTALET, Ann. Sci. Nat., ser. 7, vol. 12, p. 296, 1891 (Tatsienlu, Szechwan).

Two males, two females, and two downy young, Mount Konka, 15,700–17,000 feet, southwest Szechwan, June and August.

I have only a male of *T. t. tibetanus* with which to compare the present race, and it differs considerably from that form. In the first place *henrici* has a broad band of slaty gray across the chest separating the white throat from that of the chest, lacking in *tibetanus*; *henrici* is darker above; the upper tail coverts much lighter, without the rufous tone; and there are other differences.

The females differ from the males in having the sides of neck with black and buffy markings, the chest with some black markings also, and the chest band with fine black and buffy stippling on a gray background. The males have a little stippling on the chest band, but not to the same extent as in the females. The males (in the skin) have a yellow bill and cere, while in the female the cere and beak are dark grayish olive, becoming horn color at the tip.

One young is in the downy stage, except for the wings and tail; it was taken in June. The other young was taken in August and is in a more advanced stage of plumage; it still retains the down on the head and a little on the breast.

29. *CROSSOPTILON CROSSOPTILON* (Hodgson)

Phasianus crossoptilon HODGSON, Journ. Asiat. Soc. Bengal, vol. 7, p. 864, pl. 46, 1838 (Tibet).

Three males, northwest Yunnan (Likiang Mountains, October); six males, three females, and three unsexed, southwest Szechwan (forests of Tyon-kong, Watogomba, 14,000 feet, July; forests of Bonti, east of Waerhdje, 14,000 feet, July; Konkalongba, 14,500 feet, no date; Chengtze, 14,500—15,900 feet, May).

All the specimens from the Likiang Mountains (four) examined by me have the middle of the back pure white, while four specimens from near Tatsienlu, Szechwan, have the middle of the back washed with pale neutral gray. At Tyon-kong and Konkalongba both styles of coloration were taken, so the two styles can not be geographic. I agree with Grant⁷ that *Crossoptilon drouynii* Verreaux is probably only a synonym of *C. crossoptilon*.

30. *CHRYSOLOPHUS AMHERSTIAE* (Leadbeater)

Phasianus amherstiae LEADBEATER, Trans. Linn. Soc. London, vol. 16, p. 129, pl. 15, 1828 (mountains of Cochin China).

One adult male, forests of Kopati, southwest Szechwan, June 1; three adult males, one immature male, and two adult females, northwest Yunnan (Likiang Mountains, 9,400–12,500 feet, January; Luddü Mountains, 12,000–13,000 feet, August; Ndamucho, 14,000 feet, October).

The immature male was taken in October. It has begun to assume the crown and nape plumage of the adult; the chin, center of the throat, and jugular patch are coming in; the breast and belly plumage, but not the chest, of the adult have been assumed; the new tail is coming in, only three outside feathers on each side of the previous plumage remain, even the center feathers are not more than one-third developed, however; the wings and remainder of the upper plumage show no sign of being replaced as yet.

31. *PHASIANUS COLCHICUS ELEGANS* Elliot

Phasianus elegans ELLIOT, Ann. Mag. Nat. Hist., ser. 4, vol. 6, p. 312, 1870 (Szechwan).

One adult male and one immature male, Likiang Mountains, 9,400–13,000 feet, January and August.

Family GRUIDAE, Cranes

32. *GRUS NIGRICOLLIS* Przewalski

Grus nigricollis PRZEWALSKI, Mongol i strana Tangut, vol. 2, p. 135, pl. 9, 1876 (Kokonor); Rowley's Ornithological miscellany, vol. 2, p. 436, pl. 9, 1877 (translation).

Two females, Yungning Plain, 9,500 feet, Yunnan, December and January.

⁷ Catalogue of birds in the British Museum, vol. 22, p. 294, 1893.

Family CHARADRIIDAE, Plovers, etc.

33. VANELLUS VANELLUS (Linnaeus)

Tringa vanellus LINNAEUS, Systema naturae, ed. 10, p. 148, 1758 (Sweden).

One female, Weihsi, 8,000–9,000 feet, Yunnan, September.

34. PLUVIALIS DOMINICUS FULVUS (Gmelin)

Charadrius fulvus GMELIN, Systema naturae, vol. 1, pt. 2, p. 687, 1789 (Tahiti).

One female, Weihsi, 8,000–9,000, Yunnan, September.

35. CHARADRIUS DUBIUS DUBIUS Scopoli

Charadrius dubius SCOPOLI, Deliciae florae et faunae Insubricaе, pt. 2, p. 93, 1786 (Luzon).

One male, Weihsi, 8,000–9,000 feet, Yunnan, September.

36. CHARADRIUS PLACIDUS Gray

Charadrius placidus GRAY, Catalogue of the specimens and drawings of mammals, birds, reptiles, and fishes of Nepal and Tibet, presented by B. H. Hodgson to the British Museum, ed. 2, p. 70, 1863 (Nepal).

One male and one female, Likiang Mountains, 10,000 feet, January–February; three males, two females, and one unsexed, Weihsi, 8,000–9,000 feet, Yunnan, September.

Family SCOLOPACIDAE, Snipe, etc.

37. PISOBIA TEMMINCKII (Leisler)

Tringa temminckii LEISLER, Nachträge zu Bechsteins Naturgeschichte Deutschlands, pp. 63–73, 1812 (near Hanau on the Main, Germany).

Three males, Weihsi, 8,000–9,000 feet, Yunnan, September.

38. ACTITIS HYPOLEUCOS (Linnaeus)

Tringa hypoleucos LINNAEUS, Systema naturae, ed. 10, p. 149, 1758 (Sweden).

One male and one female, Yulo, 7,000 feet, Yunnan, August.

39. TOTANUS TOTANUS EURHINUS Oberholser

Totanus totanus eurhinus OBERHOLSER, Proc. U. S. Nat. Mus., vol. 22, p. 207, 1900 (Lake Tsomoriri, Ladak).

One male, Jesilongba, 14,500–16,000 feet, Szechwan, May.

40. TRINGA OCHROPUS Linnaeus

Tringa ochropus LINNAEUS, Systema naturae, ed. 10, p. 149, 1758 (Sweden).

Two males and one female, Weihsi, 8,000–9,000 feet, Yunnan, September.

41. RHYACOPHILUS GLAREOLA (Linnaeus)

Tringa glareola LINNAEUS, Systema naturae, ed. 10, p. 149, 1758 (Sweden).

One female, Weihsi, 8,000–9,000 feet, Yunnan, September.

42. CAPELLA SOLITARIA (Hodgson)

Gallinago solitaria HODGSON, Gleanings in science, vol. 3, p. 238, 1831 (Nepal).

Three females, northwest Yunnan (Likiang Mountains, September and March; Lütien, 10,000 feet, September); one female, southwest Szechwan (Dshizhi, 12,000 feet, April).

The specimen from Dshizhi is a bird of the previous year, I suppose, as it is quite different from the adult. The sides of the neck are buffy; the chest feathers are tipped with white, and this region is more mottled than in the adult; the scapulars are broadly margined with buffy; the five outer primaries are margined with white; and there are other differences. The wing measures 160 mm.

43. SCOLOPAX RUSTICOLA RUSTICOLA Linnaeus

Scolopax rusticola LINNAEUS, Systema naturae, ed. 10, p. 146, 1758 (Sweden).

One male, Likiang Mountains, 10,000 feet, Yunnan, January.

Family LARIDAE, Gulls, etc.

44. LARUS RIDIBUNDUS SIBIRICUS Buturlin

Larus ridibundus sibiricus BUTURLIN, Messenger Orn., vol. 2, p. 66, 1911 (Kolyma Delta and Ussuriland).

One immature female, Yungning Plain, 9,500 feet, November–December; one adult female, Yungning Lake, 9,500 feet, December; and one adult male, Likiang Mountains, 9,600 feet, January, Yunnan.

45. LARUS FUSCUS TAIMYRENSIS Buturlin

Larus affinis taimyrensis BUTURLIN, Messenger Orn., vol. 2, p. 149, 1911 (Gulf of Yenisei, Siberia).

One immature male, Yungning Lake, 9,500 feet, Yunnan, January. This seems to be a new record for this Province.

Family COLUMBIDAE, Doves, etc.

46. SPHENURUS SPHENURUS YUNNANENSIS (LaTouche)

Sphenocercus sphenurus yunnanensis LATOUCHE, Bull. Brit. Orn. Club, vol. 42, p. 13, 1921 (Lutukow, southeast Yunnan).

One female, forests of Gowa, 10,000 feet, northwest Yunnan, May, and one female, Mount Mitzuga, 10,000 feet, Muli, southwest Szechwan, June.

47. STREPTOPELIA CHINENSIS FORRESTI Rothschild

Streptopelia chinensis forresti ROTHSCHILD, Nov. Zool., vol. 32, p. 293, 1925 (Tengyueh, Yunnan).

One male and one female, Likiang Mountains, 10,000 feet, Yunnan, January–February.

48. OENOPELIA TRANQUEBARICA HUMILIS (Temminck)

Columba humilis TEMMINCK, Nouveau recueil de planches coloriées d'oiseaux, liv. 44, pl. 259, 1824 (Bengal, Luzon).

Six males and one female, Tatsienlu, 9,500–10,000 feet, Szechwan, May.

The five adult males in the above series have been compared with seven adult males from Luzon. On the whole the Chinese series appears to be slightly darker, but there are individual birds that are so close that they can be distinguished only with difficulty. The Luzon birds have slightly shorter wings. The seven Luzon birds' wings measure: 130.5–140 mm. (136.9); while the five Chinese birds' wings measure: 139.5–142 mm. (140.7). On the whole the Luzon and Chinese series are too close to separate by name.

49. COLUMBA HODGSONII Vigors

Columba hodgsonii VIGORS, Proc. Zool. Soc. London, 1832, p. 16 (Nepal).

Two males, Muli Valley, 9,600 feet, southwest Szechwan, June.

50. COLUMBA LEUCONOTA GRADARIA Hartert

Columba leuconota gradaria HARTERT, Nov. Zool., p. 85, 1916 (Sungpan, Szechwan).

Three males and three females, southwest Szechwan (Mount Konka, 16,500 feet, June; Ronapien, Shouchu Basin, 14,500 feet, August; Brüolo-kong Valley, 13,000–15,900 feet, May; Chengtze, 14,500–15,900 feet, May).

Specimens from Yunnan and from the southern border of southwest Szechwan have the mantle somewhat darker than birds from farther north, but agree with northern birds in having lighter, grayer heads than the typical *leuconota* from Kashmir. On the whole the Yunnan specimens are better placed with the northern race, though somewhat intermediate.

51. COLUMBA RUPESTRIS AUSTRINA Riley

Columba rupestris austrina RILEY, Proc. Biol. Soc. Washington, vol. 43, p. 133, 1930 (Chengtze, Szechwan).

Three males, Chengtze, 14,500–15,900 feet, Szechwan, May.

Besides the above, the United States National Museum contains three males and three females from Szechwan (Tatsienlu or vicinity,

Nachuka, and Sungpan). From northeast Kansu and just over the border in Inner Mongolia it has four males and two females, and from the Eastern Tombs, Chihli, one female.

The series from Szechwan is darker on the breast and belly and considerably darker on the upper tail coverts when compared with the Kansu and more northern specimens; there seems to be no appreciable difference in size. The single male from Sungpan is somewhat intermediate; the upper tail coverts are slightly lighter than those of the more southern birds, but darker than in the northern race; I would, however, place it with the southern form for the present.

When the above race was described, I overlooked comparing it with *Columba taczanowskii* Stejneger.⁸ The latter was founded upon a single adult male from southern Korea. This specimen is certainly darker than the series from Inner Mongolia and northeastern Kansu, which I regard as *Columba rupestris rupestris* for the present, and the chest is more extensively suffused with a darker vinaceous-purple. *Columba taczanowskii* is certainly very close to *Columba rupestris australis*; it is only slightly lighter and has the chest a little more extensively vinaceous-purple. If more material should make it advisable to recognize an eastern race of *Columba rupestris*, it seems to me the name *Columba leucozonura* Swinhoe⁹ described from Talién Bay, southern Manchuria, will have to be used for it.

Family CUCULIDAE, Cuckoos

52. CUCULUS CANORUS BAKERI Hartert

Cuculus canorus bakeri HARTERT, Die Vögel der paläarktischen Fauna, vol. 2. Heft 7, p. 948, 1912 (Shillong, Assam).

One female, Yangtze Gorge, Yungning, 10,200 feet, Yunnan, May; three males and one female, southwest Szechwan (between Bonti and Waerhdje, 14,000 feet, July; Yulonghsi Valley, 13,000-16,000 feet, May; Tatsienlu, 9,500-10,000 feet, May).

If Stuart Baker's description¹⁰ of *Cuculus optatus* holds good, then the majority of the birds that were so identified previously from Yunnan¹¹ and the above belong to *bakeri*. All the specimens in the United States National Museum from the mountains of Yunnan and Szechwan, except three young of the year from Yunnan, have the carpo-metacarpal joint of the wing white, barred more or less with grayish or dusky. The only available specimens having the carpo-metacarpal joint white and unbarred are six from Japan (only two adults), one from Copper Island, two from near Shanghai, two

⁸ Proc. U. S. Nat. Mus., vol. 16, p. 624, 1893.

⁹ Ibis, 1861, p. 259.

¹⁰ Fauna of British India, Birds, vol. 4, ed. 2, p. 141, 1927.

¹¹ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 15, 1926.

from Nanking, and three young of the year from Yunnan. All the latter are smaller than those with the barred carpo-metacarpal. Now the birds that have the carpo-metacarpal barred are darker above and the barring below is heavier than in *Cuculus canorus telephonus* and apparently represent the breeding form throughout the mountains of western China from northern Szechwan south into Yunnan and Assam. From the description, I believe this to be *Cuculus canorus bakeri* Hartert. This constitutes only an extension of the known range northward in the mountains.

Rothschild¹² records *bakeri* from Yunnan and Lönnberg¹³ from western Kansu, and Bangs and Peters¹⁴ have recently not only recorded it from the mountains of Kansu but from eastern Tibet.

The wings of the four undoubted adults of *optatus* measure: 213, 213, 203, and 195 mm. Twelve males of the dark breeding birds from the mountains of Yunnan and Szechwan with barred carpo-metacarpal feathers have wings measuring 213–231 (225) mm. Three females of the same form from the region have wings measuring 213, 220, and 220 mm. Thus it will be seen that *Cuculus optatus* apparently breeds in the mountains along with the present form, as the three immatures from Yunnan indicate.

The four birds recorded by the author¹⁵ from Kansu as *Cuculus canorus telephonus* prove on reexamination to be both that form and *bakeri*. The adults from Ninghsia and Lanchow were correctly determined; the immature and adult from 120 miles south of Lanchow belong to *bakeri*. It is probable that the latter is the breeding form and that *telephonus* is only a straggler in the Province.

53. CUCULUS OPTATUS Gould

Cuculus optatus GOULD, Proc. Zool. Soc. London, 1845, p. 18 (Port Essington, Australia).

One immature female, Yulo, 7,000 feet, Yunnan, August.

54. HIEROCOCCYX SPARVERIODES (Vigors)

Cuculus sparveriioides VIGORS, Proc. Zool. Soc. London, 1832, p. 173 (Himalaya).

One male, Lapo-laze, north of Likiang, 10,000 feet, Yunnan, May, and one male, Muli Mountains, 10,000 feet, south west Szechwan, June.

55. CACOMANTIS MERULINUS QUERULUS Heine

Cacomantis querulus HEINE, Journ. f. Orn., 1863, p. 352 (India, Nepal, Burma).

One male, Weihsi, 11,000 feet, northwest Yunnan, September.

¹² Nov. Zool., vol. 33, p. 236, 1926.

¹³ Ibis, 1924, p. 318.

¹⁴ Bull. Mus. Comp. Zoöl., vol. 68, p. 331, 1928.

¹⁵ Proc. U. S. Nat. Mus., vol. 77, art. 15, p. 13, 1930.

56. *CHALCITES MACULATUS MACULATUS* (Gmelin)

Trogon maculatus GMELIN, Systema naturae, vol. 1, pt. 1, p. 404, 1788 (Ceylon, error; Pegu).

One female, Noön forests, 11,000 feet, east of Muli, southwest Szechwan, August.

Family PSITTACIDAE, Parrots

57. *PSITTACULA SCHISTICEPS FINSCHI* (Hume)

Palaeornis finschi HUME, Stray Feathers, vol. 2, p. 509, 1874 (Kollidoo, Salwin River).

One adult male, two immature males, one adult female, and one immature female, Yulo, 7,000 feet, northwest Yunnan, August.

The adults are in molt. The tail is being renewed from the center outward, and in the female the plumage of the whole head and throat is being renewed and the two outer primaries on each side are coming in; the second primary is almost full grown; the outer primary is barely out of its sheath.

58. *PSITTACULA DERBIANA* (Fraser)

Palaeornis derbiana FRASER, Proc. Zool. Soc. London, 1850, p. 245, pl. 25 (cage bird).

Three males and one female, northwest Yunnan (Likiang-Yungning Lake, 10,200 feet, May; Lapo-laze, 9,000 feet, May); seven males and seven females, southwest Szechwan (Noön, east of Muli, 10,500 feet, August; Mount Gibboh, 13,000 feet, Muli, August; Shouchu Valley, 12,000 feet, August).

In this large series there is quite a little variation. The males have the chest and breast ranging from Hay's lilac to a dull violet-blue. The birds with the latter color have the head almost as deep a violet as the chest, only the forehead next to the black frontal band, around the eye, and lores being washed with bremen blue. This stage of plumage, I think, is that of the old males. The males with lilac chests have the pileum washed with greenish and are probably younger birds, but they probably breed in this plumage as their tails are much worn. In the female the range of color of the lower-parts is not so great as in the male, varying from dark lavender to light vinaceous-lilac. The forehead and the sides of the head are more extensively washed with bremen blue. The females have the maxilla black, while in the males it is scarlet. Unfortunately, for my theory of the lighter breasted male being a younger bird, there is a young male from Noön with maxilla black, only dull red at the base. The chest and breast are already quite dark, much darker

than the lilac-breasted male, but not so dark as dull violet-blue. It is just becoming slightly bluish on the crown, the rest of the pileum is washed with greenish, grayish olive on the occiput. Nevertheless, I think the lilac-breasted male a younger stage than the dull violet-blue male; these parts have somewhat faded in the former. The dull violet-blue-breasted male was taken in May, but it never would have faded to the lilac stage. There is naturally some variation, either individual or age.

Family MICROPODIDAE, Swifts

59. COLLOCALIA LOWI PELLOES Thayer and Bangs

Collocalia inopina pellos THAYER and BANGS, Mem. Mus. Comp. Zoöl., vol. 40, no. 4, p. 158, 1912 (Washan, west Szechwan).

One female, Noön forests, east of Muli, 11,000 feet, southwest Szechwan, August.

The above specimen agrees with skins from the type locality of the race. The wing measures 137 mm.

60. MICROPUS PACIFICUS PACIFICUS (Latham)

Hirundo pacifica LATHAM, Index ornithologicus, Suppl., p. 58, 1801 (Australia).

One unsexed, Petien or Barongomba, one day's trip northeast of Baurong, 11,000–12,000 feet, southwest Szechwan, no date.

61. HIRUNDAPUS NUDIPES (Hodgson)

Chaetura nudipes HODGSON, Journ. Asiat. Soc. Bengal, vol. 5, p. 779, 1836 (Nepal).

One adult male, Shouchu Valley, 12,000 feet, southwest Szechwan, August.

This bird is very different in plumage from *Hirundapus caudacutus*, and their ranges apparently do not meet at any point. For these reasons it seems they should be treated as separate species. *Hirundapus nudipes* resembles *H. caudacutus* in color but is much darker throughout; the forehead is dark brown, only a little paler than the crown, not white; and it is larger. The above specimen has a wing 208 mm. long.

Family ALCEDINIDAE, Kingfishers

62. HALCYON PILEATA (Boddaert)

Alcedo pileata BODDAERT, Table planches des enluminées d'histoire naturelle de M. d'Aubenton, p. 41, 1783 (Canton, China).

One female, Yulinggong, 11,000 feet, 10 miles south of Tatsienlu, May.

63. *ALCEDO ATTHIS BENGALENSIS* Gmelin

Alcedo bengalensis GMELIN, Systema naturae, vol. 1, pt. 1, p. 450, 1788 (Bengal).

One male, Yungning Mountains, 12,000–13,000 feet, November–December; two males and one unsexed, Weihsi, 8,000–9,000 feet, Yunnan, September.

Family PICIDAE, Woodpeckers

64. *THRIPONAX FORRESTI* (Rothschild)

Dryocopus forresti ROTHSCHILD, Bull. Brit. Orn. Club, vol. 43, p. 9, 1922 (Mekong Valley, Yunnan).

One male and one female, Ndamucho, 11,000 feet, Yunnan, October.

The specimen formerly recorded as an adult male¹⁶ was incorrectly sexed. It is an adult female. The above male resembles the same sex of *Thriponax richardsi* very closely. The only male specimen of the latter available for comparison has a broad space above the eye black, while in *forresti* the red of the crown reaches the eyelid posteriorly. This feature is not mentioned in the original description, and it may be only individual.

The female of *T. forresti* has the occiput red, while in the same sex of *T. richardsi* the whole crest is black without any red. Otherwise the two species are much alike superficially.

65. *PICOIDES FUNEBRIS* Verreaux

Picoides funebris VERREAUX, Nouv. Arch. Mus. Paris, vol. 6, Bull., p. 33, 1870 (mountains of Chinese Tibet).

Four males and five females, southwest Szechwan (Mount Mitzuga, 13,500 feet, Muli, June; back of Mount Mitzuga, 13,000 feet, June; Mount Konka, 14,000 feet, June; forests of Bonti, east of Waerhdje, 13,000 feet, July; Noön forests, 11,000 feet, east of Muli, August; Dshizhi, 13,500 feet, April; Mount Gibboh, 13,000–14,000 feet, April).

Only five of the above specimens are old adult birds. The rest are birds of the year in various stages of plumage, but none in the nestling stage. The youngest plumage of the male represented resembles the adult and has the yellow crown, but the breast and belly are without any white bars; the outer tail feathers have a few linear, irregular, white markings not quite reaching the margin distally; the white markings above are sparse; and the bill is shorter. As the bird becomes older, whitish bars appear below, the white markings increase above, and the white markings on the outer tail feathers become white ovoid spots mostly on the outer web, but one on the inner web, and a double spot subterminally, sepa-

¹⁶ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 17, 1926.

rated by the black shaft. The next stage of the male is not represented, but it is carried on in one of the immature females where the white markings above and below are only a little less numerous than in the adult and the barring on the outer tail feathers with the white bars farther apart than in the adult and interrupted proximally; the pileum is without any white markings. Another female is acquiring white spots on the forehead.

66. *HYPOPICUS HYPERYTHRUS HYPERYTHRUS* (Vigors)

Picus hyperythrus VIGORS, Proc. Zool. Soc. London, 1831, p. 23 (Himalayan Mountains).

Four males and three females, southwest Szechwan (forests of Djago, Muli, 10,000–12,000 feet, June and April; forests of Baude-Shaya, 12,500–13,000 feet, northeast of Muli, July; Noön forests, 10,500 feet, east of Muli, August; Mount Gibboh, 13,000 feet, Muli, August; Chüchulongba, 13,000–14,000 feet, no date).

The above specimens are darker and brighter than the north China form, *Hypopicus hyperythrus subrufinus*. Two of the above specimens (male and female) are birds of the year with the underparts barred with black. The female taken in June has the throat and all the underparts barred; the male taken in August has the barring below much reduced and confined mostly to the chest and sides. One of the males in apparently adult plumage (Mount Gibboh, August) has the lower as well as the upper mandible black as in the immature specimens; it may be a bird of the year also.

67. *DRYOBATES MAJOR STRESEMANNI* Rensch

Dryobates major stresemanni RENSCH, Abh. Ber. Mus. Tierk. Volkerk. Dresden, vol. 16, no. 2, p. 38, 1924 (Tsalila, Szechwan).

One female, Yungning Mountains, 12,000–13,000 feet, Yunnan, November–December; three males and two females, southwest Szechwan (Muli Mountains, 10,000 feet, June; Djago, 11,200–12,000 feet, April; Shangentze, 14,500 feet, May; Chüchulongba, 13,000–14,000 feet, no date).

68. *DRYOBATES DARJELLENSIS DESMURSI* (Verreaux)

Picus desmursi Verreaux, Nouv. Arch. Mus. Paris, vol. 6, Bull., p. 33, 1870 (mountains of Chinese Tibet).

One adult male, Ndamucho, 14,000 feet, Yunnan, October.

The United States National Museum contains an adult female from Yunnan and another from Mount Omei, Szechwan. They do not seem to differ appreciably. Specimens of typical *D. darjellensis* are not available for comparison.

69. YUNGIPICUS SCINTILLICEPS CLEMENTII LaTouche

Yungipicus pygmaeus clementii LATOUCHE, Bull. Brit. Orn. Club, vol. 40, p. 51, 1919 (Chang-yang-hsien, Hupeh).

Four males and one female, northwest Yunnan (Likiang Mountains, 10,000 feet, January–February; Yulo, 7,000 feet, August; Fuchuan-shan, 9,800 feet, September); one female, southwest Szechwan (forests of Shaya, 13,000 feet, northeast of Muli, July).

This series along with the four specimens previously recorded as *Yungipicus scintilliceps omissus*¹⁷ is darker and more heavily striped below than specimens from north China. Two males and one female from Yulo and a male from Fuchuan-shan have a sulphur-yellow wash to the breast and belly not seen in the Likiang specimens, but a small series from Mount Omei almost exactly matches the Yulo specimens. One male and two females from Fukien, a male from Yochow, Hunan, and a male from Hsien-shan-hsien, Hupeh, are very similar in color to the Mount Omei birds. The lack of the yellow wash to the breast and belly in the Likiang specimens is due to fading, I believe, as they are birds taken late in spring or in summer, while those with the yellow wash are fall or early-winter birds. All the birds from Yunnan, Szechwan, Hupeh, Hunan, or Fukien before me are equally heavily striped below, and there does not appear to be any appreciable difference in size.

Seven males from northwest Yunnan measure: Wing, 99–106 mm. (101.6); culmen, 16.5–18 (17.7). Three males from Szechwan measure: Wing, 99.5–101.5 (100.3); culmen, 17–18 (17.3). Three males from Fukien, Hunan, and Hupeh measure: Wing, 100–101 (100.3); culmen, 18 mm.

This would seem to indicate that the dark-breasted birds are a southern race stretching right across south China from southern Szechwan to Fukien. If this is the true situation, then it seems LaTouche's name is to be used for it, as it has three years priority over *Dryobates pygmaeus omissus* Rothschild.¹⁸ Doctor Rensch¹⁹ has named a race from Kwanhsien, Szechwan, *Dryobates semicoronatus szetschuanensis*. I have not seen any specimens from as far north in Szechwan, but his measurements are only slightly smaller than what I get for the more southern bird, and his description seems very close also. He does not refer to *omissus* or *clementii*, but only compares his supposed race with the northern form, *scintilliceps*.

¹⁷ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 16, 1926.

¹⁸ Bull. Brit. Orn. Club, vol. 43, p. 10, 1922.

¹⁹ Abh. Ber. Mus. Tierk. Völkerk. Dresden, vol. 16, no. 2, p. 39, 1924.

70. PICUS CANUS SORDIDIOR (Rippon)

Gecinus sordidior RIPPON, Bull. Brit. Orn. Club, vol. 19, p. 32, 1906 (Yangtze Big Bend).

One male and one female, northwest Yunnan (Likiang Mountains, September; forests of Lapo-laze, 10,000 feet, May); four males and two females, southwest Szechwan (Yalung River Gorge, 11,000 feet, July; forests of Tyon-kong, Watogomba, 12,500 feet, Yalung watershed, July; Dshizhi, 13,500 feet, Muli, April; Chengtze, 14,500–15,900 feet, May).

The greens in this species quickly fade, so that by the end of the breeding season the green has mostly or entirely disappeared from the lowerparts and the upperparts, except the wings. This makes it necessary to compare specimens taken at approximately the same time or in the same state of wear. The female taken at Likiang in September almost matches a female taken south of Suifu in February in color and size. Though the series from Yunnan and Szechwan at my command is quite large, the majority of the specimens are in faded plumage and not good for comparison, but suitable for measurement. Ten males from northwest Yunnan and southwest Szechwan measure: Wing, 139–154 mm. (147.3); culmen, 33.5–40 (35.9). Six males from Suifu, Mount Omei, and north Szechwan, measure: Wing, 139–158 (147); culmen, 36.5–41 (38.3). When fresh unworn material is collected from northern Yunnan and western Szechwan and compared, I believe the supposed differences between the present race and *Picus canus setschuanus* Hesse²⁰ will largely disappear.

Family ALAUDIDAE, Larks

71. OTOCORIS ALPESTRIS KHAMENSIS Bianchi

Otocorys elvesi khamensis BIANCHI, Ibis, 1904, p. 372 (Kham, southeastern Thibet).

Five males and two females, Yulonghsi Valley, 13,000–16,000 feet, May; two males and one female, Jesilongba Valley, 14,500–16,000 feet, May; two females, Jesila, 15,600–16,300 feet, May; one male, Konkalongba, Minya Mountains, 14,500 feet, no date; one male, Yulinggong, 10 miles south of Tatsienlu, 11,000 feet, May.

All the above localities are in Szechwan, to the south of Tatsienlu, from three to four days' trip to within 10 miles of the town.

I have no good material of the related forms with which to compare this series, except one male of *Otocorys alpestris przewalskii*. The latter is a paler and apparently smaller race with the black frontal band much reduced. *Otocorys alpestris khamensis* is a rather richly colored race above with the black frontal band and black

²⁰ Orn. Monatsb., vol. 19, p. 193, 1911.

coronal patch rather broad, the white separating these two areas rather narrow.

The ten males measure: Wing, 117–124 mm. (120.5); culmen, 13.5–15 (14); the five females: Wing, 111–114 (111.9); culmen, 13–14 (13.5).

Weigold took a series in the same general region that was assigned to this form by Doctor Hartert.²¹

72. *CALANDRELLA BRACHYDACTYLA DUKHUNENSIS* (Sykes)

Alauda dukhunensis SYKES, Proc. Zool. Soc. London, 1832, p. 93 (Deccan).

One male, Weihsi, 8,000–9,000 feet, northwest Yunnan, September.

Apparently not recorded from the Province before.

73. *ALAUDA GULGULA COELIVOX* Swinhoe

Alauda coelivox SWINHOE, Zoologist, 1859, p. 6724 (Amoy); Journ. North China Branch Roy. Asiat. Soc., no. 3, p. 288, Dec., 1859.

Alauda arvensis weigoldi HARTERT, Abh. Ber. Zool. Anthr.-Ethn. Mus. Dresden, vol. 15, no. 3, p. 20, 1922 (Hankow, Hupeh).

Two males and two females, northwest Yunnan (Likiang Mountains, 10,000 feet, January-February and September; Yungning Plain, 9,300 feet, May).

The wings of the above two males measure 100 and 103 mm.; the two females, 99 and 100. Another male taken on a previous trip in the Likiang Mountains in April has a wing measurement of 94 mm. Two males from the mouth of the Yangtze have wings measuring 100 and 100.5 mm.; one male from Yochow, Hunan, has a wing of 99 mm.; the wings of five males from southern Szechwan measure 90, 91.5, 93, 95.5, and 98 mm. Two males from Hongkong measure: Wing, 91 and 92 mm. Thus the supposed difference between the Yangtze Valley bird and that of southern China does not seem to hold good, but the material at hand from the latter locality is small and not conclusive.

Family HIRUNDINIDAE, Swallows

74. *PTYONOPROGNE RUPESTRIS* (Scopoli)

Hirundo rupestris SCOPOLI, Annus I historico naturalis, 1769, p. 167 (Tirol).

One male, Kere, south of Kulu, 9,000 feet, southwest Szechwan, December.

75. *DELICHON URBICA CASHMERIENSIS* Gould

Delichon cashmeriensis GOULD, Proc. Zool. Soc. London, 1858, p. 356 (Kashmir).

One male, Mutirong, 7,000–7,800 feet, Muli, southwest Szechwan, April.

²¹ Abh. Zool. Anthr.-Ethn. Mus. Dresden, vol. 15, no. 3, p. 21, 1922.

Specimens from the mountains of western China are somewhat smaller and have the tails less deeply forked than Kashmir birds; the latter are a clearer white below and also on the rump.

Family CAMPEPHAGIDAE, Cuckoo-shrikes

76. PERICROCOTUS BREVIROSTRIS ETHOLOGUS Bangs and Phillips

Pericrocotus brevirostris ethologus BANGS and PHILLIPS, Bull. Mus. Comp. Zoöl., vol. 58, p. 282, 1914 (Hsienshan, Hupeh).

Three males and four females, northwest Yunnan (Likiang Mountains, 10,000 feet, September; Mbayiwua, 10,000 feet, April; Lütien, 10,000 feet, September; Yulo, 7,000 feet, August); two males and two females, southwest Szechwan (Mount Mitzuga, 12,000 feet, Muli, June; Muli-Yunnan border, 11,000 feet, August).

Family DICRURIDAE, Drongos

77. CHIBIA HOTTENTOTA BREVIROSTRIS Cabanis

Chibia brevirostris CABANIS, Museum Heineanum, vol. 1, p. 112, 1850 (China).

One adult female, Tatsienlu, 9,500–10,000 feet, southwest Szechwan, May.

78. DICRURUS LEUCOPHAEUS NIGRESCENS Oates

Dicrurus nigrescens OATES, in Hume's Nests and Eggs, ed. 2, vol. 1, p. 208, 1889 (Rangoon).

Two males, one female, and one unsexed, northwest Yunnan (Likiang Mountains, January–February, September, and October; Luddü Mountains, 12,000–13,000 feet, August); one female, southwest Szechwan (Mount Mitzuga, 10,000 feet, Muli, June).

Family ORIOLIDAE, Old World Orioles

79. ORIOLUS CHINENSIS TENUIROSTRIS Blyth

Oriolus tenuirostris BLYTH, Journ. Asiat. Soc. Bengal, vol. 15, p. 48, 1846 (central India).

One adult male, one immature male, one adult female, and one immature female from northwest Yunnan (Likiang Mountains, September; forests west of Yungning, 12,000 feet, May; forests of Gowa, 10,000 feet, May).

Family CORVIDAE, Crows

80. NUCIFRAGA CARYOCATACTES MACELLA Thayer and Bangs

Nucifraga hemispila macella THAYER and BANGS, Bull. Mus. Comp. Zoöl., vol. 52, p. 140, 1909 (Hsien-shan-hsien, Hupeh).

Five males and two females, northwest Yunnan (Likiang Mountains, 10,000 feet, January–February and September; Tokesher-Lapo,

10,000 feet, May; Ndamucho, 14,000 feet, October); three males and four females, southwest Szechwan (Mount Mitzuga, 13,500 feet, Muli, June; forests of Tyon-kong, Watogomba, Yalung watershed, July; Noön Valley, 10,000 feet, east of Muli, August).

81. *PYRRHOCORAX PYRRHOCORAX HIMALAYANUS* (Gould)

Fregilus himalayanus GOULD, Proc. Zool. Soc. London, 1862, p. 125 (Himalayas).

One female, Mount Konka, 16,000 feet, southwest Szechwan, June.

82. *UROCISSA ERYTHORHYNCHA ERYTHORHYNCHA* (Boddaert)

Corvus erythrorhynchus BODDAERT, Table planches des enluminez d'histoire naturelle de M. d'Aubenton, p. 38, 1783 (China).

Two males and one female, northwest Yunnan (Likiang Mountains, 10,000 feet, January–February, and Yungning Mountains, 12,000–13,000 feet, November–December).

83. *GARRULUS BISPECULARIS SINENSIS* Swinhoe

Garrulus sinensis SWINHOE, Proc. Zool. Soc. London, 1863, p. 304 (Canton to Ningpo).

Two males and three females, southwest Szechwan (mountains south of Muli, 10,500 feet, December; between Tsoso and Kulu, 10,500 feet, December; Muli Mountains, 10,000 feet, June; Mount Mitzuga, 12,500 feet, Muli, June; back of Mount Mitzuga, 10,000 feet, June).

This series compared with a series from Fukien and Chekiang substantiates the remarks made previously.²² The western birds average more grayish on the mantle. Immature specimens are much more rufescent than the adult and lack the grayish cast to the mantle. Some specimens, apparently adult, taken in winter are more rufescent than others, and the grayish cast to the mantle is almost lacking. It might be that these are birds of the year in their first winter plumage.

84. *COLOEUS DAURICUS KHAMENSIS* Bianchi

Coloeus dauricus khamensis BIANCHI, Bull. Brit. Orn. Club, vol. 16, p. 68, 1906 (Mekong River, Kham, southeast Tibet).

One female, Likiang Mountains, 10,000 feet, January–February; and one male and two females, Weihsi, 8,000–9,000 feet, northwest Yunnan, September.

85. *COLOEUS FUSCICOLLIS* (Vieillot)

Corvus fuscicollis VIEILLOT, Tableau encyclopédique et méthodique des trois règnes de la nature . . . Ornithologie, vol. 2, p. 880, 1823 (Lake Baikal).

Corvus neglectus SCHLEGEL, Bijdr. Dierk., Amsterdam, afl. 8, Corvus, p. 16, 1859 (Japan).

²² Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 64, 1926.

Two males and two females, Ndamucho, 14,000 feet, northwest Yunnan, October.

LaTouche²³ unites *dauricus* and *fuscicollis* as other authors have done, but admits that he has no proof that they are the same and presents evidence for and against such a view. It is quite possible that the black bird, *fuscicollis*, and the pied, *dauricus*, are only phases of the same species, but until this is proved to be undoubtedly the case the records had, in my opinion, better be kept separate. If the two are only color phases, it is rather queer that intermediates apparently are never or rarely found.

Stresemann²⁴ has called attention to the precedence Vieillot's name has over that of Schlegel. Lord Rothschild²⁵ regards the present bird as a dimorphic form of *dauricus*.

Family PARADOXORNITHIDAE, Parrot-bills

86. CONOSTOMA AEMODIUM AEMODIUM Hodgson

Conostoma aemodius HODGSON, Journ. Asiat. Soc. Bengal, vol. 10, p. 857, 1841 (Nepal).

Two males, six females, and one unsexed, Ndamucho, Yangtze-Mekong Divide, 14,000 feet, northwest Yunnan, October.

No specimens are available from the Himalayas or western Szechwan. The present series is referred to the above race on geographic grounds, rather than to *Conostoma aemodium bambuseti* Stresemann²⁶ from Washan, Szechwan. Since the above was written an adult male has been received from the Rev. David C. Graham taken in Mupin. It is somewhat darker below and on the occiput; the differences are not great, however.

The two males from Yunnan measure: Wing, 138.5–139 mm.; tail, 140–144; culmen, 26–26. The six females from Yunnan: Wing, 125.5–137.5 (131); tail, 137.5–145 (141.9); culmen, 22.5–25 (24). The single male from Mupin: Wing, 123.5; tail, 132; culmen, 22.

This would seem to indicate that the more northern bird is somewhat smaller, but one specimen, sexed by a native, is not sufficient to pass judgment on the validity of a race.

87. SUTHORA UNICOLOR CANASTER Thayer and Bangs

Suthora unicolor canaster THAYER and BANGS, Mem. Mus. Comp. Zoöl., vol. 40, no. 4, p. 171, 1912 (Mount Washan, Szechwan).

Four males, four females, and one unsexed, Yunnan (Likiang Mountains, 10,000 feet, January–February; Luddü Mountains, 12,000–13,000 feet, August; Ndamucho, 14,000 feet, October); two

²³ Handbook of Birds of East China, pt. 1, p. 11, 1925.

²⁴ Anz. Orn. Ges. Bayern, no. 2, p. 8, 1919.

²⁵ Nov. Zool., vol. 33 p. 341, 1926.

²⁶ Journ. Orn., 1923, p. 366.

males, five females, and two unsexed, Szechwan (Dshizhi, north of Kulu and west of the Yalung, 13,500 feet, April; Mount Gibboh, 13,000 feet, Muli, December).

88. *SUTHORA FULVIFRONS CYANOPHRYS* David

Suthora cyanophrys DAVID, Journ. Trois Voy. Emp. Chin., vol. 1, p. 345, 1875 (Chensi méridion.).

Three males and three females, Ndamucho, Yangtze-Mekong Divide, 14,000 feet, northwest Yunnan, October; one male, Dshizhi, north of Kulu and west of the Yalung, 13,500 feet, southwest Szechwan, April.

This race is quite distinct from *Suthora fulvifrons fulvifrons* in being much lighter in color, the dark bands on each side of the crown being slaty gray, instead of tawny-olive, and there are other differences. I have never seen a specimen from Shensi and do not believe any have been taken there in recent years.

89. *SUTHORA WEBBIANA RICKETTI* (Rothschild)

Paradoxornis webbiana ricketti ROTHSCHILD, Bull. Brit. Orn. Club, vol. 43, p. 11, 1922 (Yangtze Valley, Yunnan).

One adult male and four females or immature males (two marked males, the remainder unsexed), northwest Yunnan (Luddü Mountains, 12,000-13,000 feet, August; Yulo, west of the Likiang Mountains, 7,000 feet, August); one male and one female, southwest Szechwan (Yanwekong, 10,700 feet, May).

The adult male has a much larger bill than the female. These do not exactly agree with the original description. The chest and throat have a slight vinaceous-fawn cast, though in the younger specimens they are white. I have not been able to examine a specimen of *Suthora webbiana styani*, but I am under the impression that it and the present race do not belong to the *webbiana* group.

Family PARIDAE, Titmice

90. *AEGITHALOS GLAUCOGULARIS VINACEA* (Verreaux)

Mecistura vinacea VERREAUX, Nouv. Arch. Mus. Paris, vol. 6, Bull., p. 39, 1870 (mountains of Chinese Tibet); Nouv. Arch. Mus. Paris, vol. 7, Bull., p. 76, 1871 (type from Ourato).

Two males, Likiang Mountains, 10,000 feet, Yunnan, January-February.

When two specimens were recorded from the Lashipa Plain, Yunnan,²⁷ Rothschild²⁸ questioned the identification, thinking they

²⁷ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 50, 1926.

²⁸ Nov. Zool., vol. 33, p. 396, 1927.

must belong to *A. g. glaucogularis*. They were identified correctly, however, as later material has proved. The United States National Museum contains a good series of *A. g. glaucogularis*, and it is a much smaller bird with a shorter wing and much shorter tail. The two Yunnan specimens listed above measure: Wing, 68–66 mm.; tail, 78–73. Bangs and Peters²⁹ record this race from the mountains of Kansu and Tebbuland, so it seems that it is the resident race of the high mountains of western China as far south as northern Yunnan and occurring also in northern China.

91. AEGITHALISCUS BONVALOTI (Oustalet)

Acredula bonvaloti OUSTALET, Ann. Sci. Nat., Zool., ser. 7, vol. 12, p. 286, pl. 9, fig 1, 1891 (Tatsienlu and Pendjama, Szechwan).

Twenty-seven adults, both sexes, northwest Yunnan (Likiang Mountains, January–February, September and October; forests west of Yungning, 13,000 feet, May; forests of Chinhaitze, 11,000 feet, May; Gou-khü-ko, 13,000 feet, Yangtze loop, April; Luddü Mountains, 12,000–13,000 feet, August); six adults and nine immatures, southwest Szechwan (Mount Mitzuga and vicinity, 13,000 feet, June; forests of Djishigotong, northeast of Muli, 13,000 feet, July; forests of Tyon-kong, Watogomba, 12,000 feet, July; Dzampe, Muli, 14,000 feet, July).

The fine series of immatures in the present collection confirms my former doubtful action in assigning a single specimen of this plumage to the present species.³⁰ The immature plumage differs from that of the adult as there described.

92. AEGITHALISCUS CONCINNUS TALIFUENSIS Rippon

Aegithaliscus talifuensis RIPPON, Bull. Brit. Orn. Club, vol. 14, p. 18, 1903 (Gyi-dzin-shan, east of Talifu, Yunnan).

One female and one unsexed, Yulo, west of the Likiang Mountains, 7,000 feet, August; and one unsexed, Luddü Mountains, 12,000–13,000 feet, August, northwest Yunnan.

93. PERIPARUS RUFONUCHALIS BEAVANI (Jerdon)

Lophophanes beavani JERDON (Blyth MS.), Birds of India, vol. 2, p. 275, 1863 (Mount Tongloo, Sikkim).

Two females from northwest Yunnan (Likiang Mountains, 10,000 feet, January–February; Luddü Mountains, 12,000–13,000 feet, August); two males, one female, and three immatures from southwest Szechwan (Mount Mitzuga, 12,000 feet, June; forests of Noön,

²⁹ Bull. Mus. Comp. Zool., vol. 68, p. 363, 1928.

³⁰ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 50, 1926.

10,500 feet, east of Muli, August; alpine region of Zimi Valley, 15,000 feet, August; Yulinggong, 11,000 feet, May).

94. *PERIPARUS ATER AEMODIUS* (Hodgson)

Parus aemodius HODGSON, Journ. Asiat. Soc. Bengal, vol. 13, p. 943, 1844 (Nepal).

One adult male, Likiang Mountains, 10,500 feet, Yunnan, September; one young not long from the nest, alpine region of Zimi Valley, 15,000 feet, west of Waerhdje, southwest Szechwan, August.

95. *LOPHOPHANES DICHROUS WELLSI* (Baker)

Parus dichrous wellsi BAKER, Bull. Brit. Orn. Club, vol. 38, p. 8, 1917 (Yangtze Big Bend, west Yunnan).

Four males, three females, and one unsexed from northwest Yunnan (Likiang Mountains, 10,000–11,000 feet, January–February and September; Gou-khü-ko, Yangtze loop, 13,000 feet, April; forests of Yungning, 13,000 feet, May, Luddü Mountains, 12,000–13,000 feet, August; five males, one female, and two unsexed from southwest Szechwan (Mount Mitzuga, Muli, 13,000 feet, June; back of Mount Mitzuga, 12,000 feet, June; forests of Djishigotong, Yalung Basin, 13,000 feet, July; alpine region of Zimi Valley, 15,000 feet, west of Waerhdje, August; Ronopien region, west of Waerhdje, 15,000 feet, August; Mudju, 11,000 feet, June).

96. *PENTHESTES PALUSTRIS DEJEANI* (Oustalet)

Parus dejeani OUSTALET, Bull. Mus. Paris, vol. 3, p. 209, 1897 (Tatsienlu, Szechwan).

Two males and two females from northwest Yunnan (Likiang Mountains, 10,000 feet, January–February; Luddü Mountains, 12,000–13,000 feet, August; Ndamucho, Yangtze-Mekong Divide, 14,000 feet, October); three males, three females, and one unsexed southwest Szechwan (forests of Bonti, east of Waerhdje, 12,500 feet, July; Watogomba, 12,500 feet, July; forests of Djishigotong, Yalung Basin, 13,000 feet, July; Mount Gibboh, 13,000 feet, south of Muli, August; forests of Noön, 10,500 feet, east of Muli, August).

The specimen formerly recorded as of this form from Shanghai³¹ was an error; it is *Penthestes palustris hellmayri*, as more ample material since received proves. *Penthestes palustris dejeani* and *Penthestes palustris hellmayri* are much alike; the former differs only in being somewhat darker above and on the flanks. Three of the specimens taken in July have the backs very dark, more of a brown than gray, the flanks more strongly washed with drab, and

³¹ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 48, 1926.

the pileum more brownish, not so glossy a black. These are probably immature.

97. *PENTHESTES SUPERCILIOSA* (Przewalski)

Poecile superciliosa PRZEWALSKI, Mongol i strana Tangut, vol. 2, p. 53, 1876 (Alpine region of the mountains of Kansu); Rowley's Ornithological miscellany, vol. 2, p. 189, 1877 (translation).

One adult male of this rare chickadee, Yulonghsi, 13,000–16,000 feet, Szechwan, May.

98. *PARUS MAJOR TIBETANUS* Hartert

Parus major tibetanus HARTERT, Die Vögel der paläarktischen Fauna, vol. 1, Heft 3, p. 346, 1905 (Chaksam, Tsongpo Valley, Tibet).

Eight males and one female from northwest Yunnan (Likiang Mountains, 10,000–12,000 feet, January–February; forests west of Yungning, 12,000 feet, May); one male and one female from southwest Szechwan (Mutirong, 7,000–7,800 feet, Muli, April; Shangentze, south base of Druduron Pass, 14,500 feet, May).

In a former paper³² I assigned specimens from the vicinity of Suifu to *tibetanus*. This was a mistake; specimens from there belong to *artatus*; *tibetanus* is the form occurring at higher elevations and has the outer tail feathers more extensively white. The two forms do not differ greatly, however.

99. *PARUS MONTICOLUS YUNNANENSIS* LaTouche

Parus monticolus yunnanensis LATOUCHE, Bull. Brit. Orn. Club, vol. 42, p. 51, 1922 (Milati, Yunnan).

One female and one adult unsexed from northwest Yunnan (mountains of Yungning, 12,000–13,000 feet, November–December, and Shintsang, west of Weihsi, 11,000 feet, September); four males and one female from southwest Szechwan (forests of Vudju, south of Muli, 10,000 feet, May; forests of Baude-Shaya, northeast of Muli, 12,500 feet, July; Noön forests, east of Muli, 10,500 feet, August; Mutirong, 7,000–7,800 feet, April; Yanwekong Valley, 10,000–12,000 feet, May).

Family SITTIDAE, Nuthatches

100. *SITTA YUNNANENSIS* Grant

Sitta yunnanensis GRANT, Bull. Brit. Orn. Club, vol. 10, p. 37, 1900 (Weiyuan, south Yunnan).

Fifteen adults, both sexes, from northwest Yunnan (Likiang Mountains, 10,000 feet, January–February; mountains of Yungning,

³² Proc. U. S. Nat. Mus., vol. 77, art. 15, p. 21, 1930.

12,000–13,000 feet, November–December; Lautsolö Gorge, 9,000 feet, April; Luddü Mountains, 12,000–13,000 feet, August); two females from southwest Szechwan (Vudju Mountains, 10,500 feet, May).

This very distinct species resembles *Sitta villosa* of north China in general appearance, but there are numerous differences. *S. yunnanensis* has a black line on the side of the head from the lores through the eye to the nape with a narrow white superciliary above it, the pileum bluish gray, while in the fully adult male *S. villosa* the whole top of the head is black with a white superciliary; the latter is a smaller bird.

The tail of *S. yunnanensis* is somewhat variable. The white on the outer tail feathers is reduced to a mere subterminal spot on the inner web in some specimens, while in others it is a narrow diagonal subterminal bar, extending across the feather.

101. *SITTA SINENSIS NEBULOSA* LaTouche

Sitta europaea nebulosa LATOUCHE, Bull. Brit. Orn. Club, vol. 42, p. 55, 1922 (new name for *Sitta europaea obscura* preoccupied; Milati, Yunnan).

Seventeen adults, both sexes, from northwest Yunnan (Likiang Mountains, January–February, September, and October; mountains of Yungning, 12,000–13,000 feet, November–December; forests west of Yungning, 13,000 feet, May; forests of Lapo-laze, 10,000 feet, May; Tokesher, 10,000 feet, May; Luddü Mountains, 12,000–13,000 feet, August; Fuchuanshan, 10,000–12,000 feet, September; Ndamucho, 14,000 feet, October); 10 adults, both sexes from southwest Szechwan (Muli River Valley, 9,800 feet, May; Mount Mitzuga, 13,000 feet, June; Shouchu Valley, near Dzeru, 11,300 feet, August; Noön Valley, east of Muli, 10,500 feet, August; Mount Gibboh, 13,000 feet, Muli, May and August).

102. *SITTA MAGNA* Ramsay

Sitta magna RAMSAY, Proc. Zool. Soc. London, 1873, p. 677 (Karennee).

One female, Mbayiwua, 10,000 feet, Yangtze loop, Yunnan, April.

Family CERTHIIDAE, Creepers

103. *CERTHIA HIMALAYANA YUNNANENSIS* Sharpe

Certhia yunnanensis SHARPE, Bull. Brit. Orn. Club, vol. 13, p. 11, 1902 (Shayang, west Yunnan).

Two adult males, one adult female, and one immature, not sexed, southwest Szechwan (Muli Mountains, Litang River Valley, 10,000 feet, May; Mount Mitzuga, Muli, 13,000 feet, June; Yetsi Valley, north of Kulu, 12,000 feet, April; Mudju, 11,000 feet, June), and one adult female, northwest Yunnan (Luddü Mountains, 12,000–13,000 feet, August).

Two winter specimens from Chengtu, Szechwan, have a more rusty tinge to the upperparts.

104. *CERTHIA FAMILIARIS KHAMENSIS* Bianchi

Certhia khamensis BIANCHI, in Sharpe's Handlist of the genera and species of birds, vol. 4, pp. 355, 360, 1903 (Kansu: Szechwan; southeast Tibet).

One adult unsexed from Yunnan (Likiang Mountains, 10,000 feet, January–February); one male and one unsexed from southwest Szechwan (Mount Gibboh, Muli, 13,000 feet, May; Mount Mitzuga, Muli, 13,000 feet, June).

105. *TICHODROMA MURARIA* (Linnaeus)

Certhia muraria LINNAEUS, Systema naturae, ed. 12, p. 184, 1766 (south Europe).

One male, Mount Konka, 15,700 feet, August; and one female, Djago, 11,200–12,000 feet, April, both in Muli, southwest Szechwan.

Family TIMALIIDAE, Babbling Thrushes

106. *IANTHOCINCLA MAXIMA* (Verreaux)

Pterorhinus maximus VERREAUX, Nouv. Arch. Mus. Paris, vol. 6, Bull., p. 36, pl. 3, fig. 1, 1870 (mountains of Chinese Tibet).

Three males and two females, northwest Yunnan (Likiang Mountains, 10,000 feet, January–February, and Ndamucho, 14,000 feet, October); seven males, five females, one unsexed, and one immature, southwest Szechwan (Muli, 10,000 feet, December; Mount Mitzuga, 12,500 feet, June; back of Mount Mitzuga, 12,000–13,000 feet, June; Mount Konka, 14,600 feet, June; forests of Bonti, east of Waerhdje, 12,500 feet, July; Mount Gibboh, 12,500–14,000 feet, south of Muli, August and April; Zimi Valley, 14,600 feet, west of Waerhdje, August; Chiu-lung-hsien, May; Shangentze, 14,500 feet, at the foot of Druduron Pass, May).

The immature bird is not long from the nest and was taken in June. The plumage is almost a duplicate of that of the adult. The hazel of the throat and ear coverts is considerably lighter; the neutral gray bases of the feathers of the jugulum show through, making a dark patch and the middle tail feathers are warm sepia. An older specimen, but a bird of the year, taken in July, has the colors of the throat and ear coverts deepened; and the neutral gray jugular patch more pronounced.

107. *IANTHOCINCLA BIETI* Oustalet

Ianthocincla bieti OUSTALET, Bull. Mus. Paris, vol. 3, p. 163, 1897 (Tatsienlu, Szechwan).

One male, Ndamucho, 14,000 feet, Yunnan, October; and one female, Mount Gibboh, 13,000–14,000 feet, Muli, Szechwan, April.

The above female differs from any in the series previously reported upon³³ as follows: The pileum is bister; the throat and upper chest a light clove brown; the feathers of the sides of the neck and chest merely fringed narrowly with white; the flank feathers without the subterminal black bar; and there are other differences. Whether these differences are sexual can not be determined, but I am inclined to the belief that they are age characters. The females in Doctor Rock's earlier collection only differ from the males in being duller, if they differ at all.

108. *BABAX LANCEOLATUS LANCEOLATUS* (Verreaux)

Pterorhinus lanceolatus VERREAUX, Nouv. Arch. Mus. Paris, vol. 6, Bull., p. 36, 1871 (mountains of Chinese Tibet).

Two males and two females, northwest Yunnan (Likiang Mountains, 10,000 feet, January–February and September; Ndamucho, 14,000 feet, October); five males and six females, southwest Szechwan (forests of Watogomba, 12,500 feet, Yalung watershed, July; forest of Djishi, 11,000 feet, northeast of Muli, July; forests of Noön, 10,500 feet, east of Muli, August; mountains of Kulu, 11,000 feet, December; Briiolo-kong Valley, 13,000–15,900 feet, eight days southwest of Tatsienlu, May; Shangentze, 14,500 feet, May; Yuling-gong, 11,000 feet, May).

With a much larger series before me than when Doctor Rock's former collection from Yunnan was reported upon,³⁴ I am unable to recognize *bonvaloti* as a valid race. The single specimen from Hupeh marked as a male upon which my remarks upon size were founded, I am convinced now is wrongly sexed and that it is really a female. The female is considerably smaller than the male. Since that paper was written, females have been received from Szechwan and Yunnan that are as small as the Hupeh specimen in question.

109. *GARRULAX ALBOGULARIS EOUS* Riley

Garrulax albogularis eous RILEY, Proc. Biol. Soc. Washington, vol. 43, p. 79, 1930 (Fuchuanshan, Yunnan).

Four males and two females, Fuchuanshan, 9,800 feet, Yunnan, September.

This race was described as follows:

Similar to *Garrulax albogularis albogularis*, but much lighter above, the forehead more strongly and extensively tinged with tawny; the cinnamon-buff of the breast lighter; the chest band a lighter brownish olive. Wing, 136; tail, 136; culmen, 22; tarsus, 43; middle toe, 24 mm.

³³ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 25, 1926.

³⁴ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 23, 1926.

The above series is quite uniform and differs as described from an unsexed specimen from Nepal. When the original description was published, the United States National Museum only had four poor specimens from Szechwan. The Rev. David C. Graham has since sent to the Museum nine fine adults taken on Mount Omei, Szechwan. These are darker than *eous*, but lighter than *albogularis*. On the whole the bird from Szechwan is nearer the race from Nepal (*albogularis*) than that from Yunnan (*eous*). The Szechwan form has been named *Garrulax albogularis laetus*.³⁵ Stresemann³⁶ has reported it from as far north in the mountains of Szechwan as Kwan.

110. DRYONASTES SANNIO (Swinhoe)

Garrulax sannio SWINHÖE, Ibis, 1867, p. 403 (Amoy, China).

Six males and seven females, northwest Yunnan (Likiang Mountains, January–February, and September; Yulo, 7,000 feet, August; Weihsi, 8,000–9,000 feet, September; Ndamucho, 14,000 feet, October); one female without locality or date.

With a larger series than formerly at my disposal³⁷ I am inclined to agree with Rothschild³⁸ in not recognizing *albosuperciliaris*, but I have not examined many specimens from Fukien. Birds from southern Szechwan (Suifu and Kiating) are darker above and below than either the Yunnan or Fukien specimens, but it is inadvisable to separate them by name.

111. DRYONASTES BERTHEMYI RICINUS Riley

Dryonastes berthemyi ricinus RILEY, Proc. Biol. Soc. Washington, vol. 43, p. 80, 1930 (Ndamucho, Yunnan).

One male and two females, Ndamucho, 14,000 feet, Yunnan, October.

These three specimens, when compared with an equal number from the type locality of *berthemyi*, Kuatun, Fokien, may be described as follows:

Similar to *Dryonastes berthemyi* of the mountains of Fokien, but lighter brown above and on the foreneck and jugulum; breast and belly a much lighter gray. Wing, 126; tail, 132; culmen, 20; tarsus, 42; middle toe, 24.5 mm.

In the original description, I said that *Dryonastes berthemyi* had never been taken away from the mountains of northwest Fokien, overlooking for the moment Stresemann's³⁹ record of a specimen from Mount Omei, Szechwan. This specimen is probably the same

³⁵ Proc. Biol. Soc. Washington, vol. 43, p. 133, 1930.

³⁶ Abh. Ber. Mus. Tierk. Völkerk. Dresden, vol. 16, no. 2, p. 25, 1924.

³⁷ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 27, 1926.

³⁸ Nov. Zool., vol. 33, p. 267, 1926.

³⁹ Abh. Ber. Mus. Tierk. Völkerk. Dresden, vol. 16, no. 2, p. 24, 1924.

as that from Yunnan or will later be found to differ and need naming.

The type of *Dryonastes berthemyi* came from the mountains of northwest Fokien, probably Kuatun. It is rather surprising to find a closely related form in the high mountains of northwest Yunnan, more than 1,000 miles from the type locality of the species. Ndamucho is south of Lütien on the Yangtze-Mekong Divide. The United States National Museum contains an adult female of *Dryonastes berthemyi* from the type locality, and the Museum of Comparative Zoölogy has loaned me a pair from near the same place; the three specimens are quite uniform. The three specimens from northwest Yunnan are also quite uniform and differ from the Fokien bird as described. The three specimens from Yunnan measure: Wing, 120–128 mm. (124); tail, 125–132 (128); culmen, 20–22 (20.7). Two females and one male from Fokien measure: Wing, 116–118 (116.8); tail, 122–126 (123.5); culmen, 22.5–23 (22.7).

LaTouche⁴⁰ makes *berthemyi* a race of *poecilorhynchus* of Formosa, but I do not think he is right in doing so. They have both been derived from the same stock, but now are so distinct that it is misleading to treat them as forms of the same species.

112. POMATORHINUS RUFICOLLIS SIMILIS Rothschild

Pomatorhinus ruficollis similis ROTHSCHILD, Nov. Zool., vol. 33, p. 261, 1926 (Tengyueh, Yunnan).

Three males and four females, northwest Yunnan (Likiang Mountains, January–February and September; mountains of Yungning, November–December; upper slopes of the Fuchuanshan, 10,000–12,000 feet, September; Weihsi, 8,000–9,000 feet, September; Ndamucho, 14,000 feet, October); one female, southwest Szechwan (Muli Valley, 9,500 feet, June).

This is quite a distinct race, Saccardo's umber above; quite different from *Pomatorhinus ruficollis eidos* from Yangtze Valley farther east, which is strongly tinged with rufous above and has a smaller bill. The latter occurs in two ventral color phases: one in which the chest streaks are rufous and the other in which they are brownish olive, but no matter which phase the specimen is in, the upperparts are strongly tinged with rufous. *P. r. similis* is quite uniform in series and does not vary much; specimens from the Mekong Valley are Saccardo's umber above, while those from the Likiang Mountains are light brownish olive. Just where the ranges of *similis* and *eidos* meet it is impossible to say. The United States National Museum has the latter from the Szechwan border south of Suifu, Mount Omei, and the vicinity of Suifu, but not from farther west.

⁴⁰ Handbook of Birds of East China, pt. 1, p. 57, 1925.

P. r. similis was formerly recorded as *P. r. bakeri*⁴¹ from Yunnan, following Rothschild's earlier papers, as no authentic specimens from Burma were available for comparison.

113. *POMATORHINUS ERYTHROGENYS DEDEKENSIS* Oustalet

Pomatorhinus maccllellandi var. *dedekensi* OUSTALET, Ann. Sci. Nat. Zool., ser. 7, vol. 12, pp. 276, 304, 1892 (Tsonghai, Tibet and Tatsienlu, Szechwan).

Thirteen adults, both sexes, northwest Yunnan (Likiang Mountains, January–February and October; Yulo, 7,000 feet, August; Ndamucho, 14,000 feet, October); two males and six females, southwest Szechwan (Muli Valley, 10,000 feet, June; Muli Mountains, 10,000 feet, June; Mount Mitzuga, 12,500 feet–13,000 feet, Muli, June; Dzampe 14,000 feet, Muli, July; Djago, 11,200–12,000 feet, April; Tatsienlu, 9,500–10,000 feet, May); one female, without locality.

The variations in a large series of this race are considerable. The specimens taken in the winter are light brownish olive above; by summer they become hair brown by fading. The male has a longer bill than the female. Three adults from Tatsienlu taken in the breeding season do not differ appreciably from three adults taken at the same season in Muli.

In reporting on Doctor Rock's former collection from Yunnan⁴² four specimens from the Mekong Valley were listed without specific comment. These four specimens have the black streaks on the chest very pronounced, especially in a male, U. S. N. M. No. 296712, which has even the breast spotted quite heavily with black spots, but as some of the specimens from farther north approach the lightest marked Mekong Valley specimen very closely, these heavily streaked birds had better be regarded as individual variations for the present.

Two females from Mount Mitzuga are evidently birds of the year in nearly adult plumage; their bills are remarkably short, 23 and 24 mm. against an adult measurement of 32–35.

114. *TROCHALOPTERON ELLIOTII ELLIOTII* Verreaux

Trochalopteron elliotii VERREAUX, Nouv. Arch. Mus. Paris, vol. 6, Bull., p. 36, 1870 (mountains of Chinese Tibet).

Twelve males, eight females, and one immature not sexed, northwest Yunnan (Likiang Mountains, January–February, and September; Mountains of Yungning, 12,000–13,000 feet, November–December; Ndamucho, 14,000 feet, October; Luddü Mountains, 12,000–13,000 feet, August); 11 males and 6 females, southwest Szechwan

⁴¹ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 26, 1926.

⁴² Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 27, 1926.

(Muli, 10,500 feet, December; back of Mount Mitzuga, 12,000 feet, Muli, June; Mount Gibboh, 13,000 feet, Muli, August; Baude Mountains, 10,000 feet, northeast of Muli, July; Tyon-kong, Watogomba, Yalung watershed 12,000 feet, July; Djago, 10,400–12,000 feet, between Muli and Kulu, December and April; Vudju, 10,000 feet, south of Mount Gibboh, April; Dshizhi, 13,500 feet, April; Yanwekong, 10,000–12,000 feet, May; Yulonghsi, 13,000–16,000 feet, May; Mudju, 11,000 feet, June; Yulinggong, 11,000 feet, May; Tatsienlu, 9,500–10,000 feet May).

This species is much subject to fading. Specimens taken in the winter are much darker even than birds collected in early spring. The winter taken birds in the above series are dark like winter taken specimens from Szechwan. It will be noted that the series I formerly determined to be *Trochalopteron ellioti yunnanense*⁴³ are spring or summer taken birds with the exception of several immatures. When breeding birds from Szechwan are compared with these spring taken, the lighter color of the supposed Yunnan race largely disappears. The gray or yellow middle tail feathers are also due to fading to some extent. All the specimens with gray middle tail feathers are in faded or worn plumage, but not all specimens in worn plumage have gray middle tail feathers. This is natural; it is well known some individuals of a species wear or fade quicker than others. There are a number of specimens in worn plumage in the United States National Museum from Szechwan with gray middle tail feathers. Taking all the above into consideration, I do not now believe that *Trochalopteron ellioti yunnanense* can be maintained as a valid race. Therefore *Garrulax ellioti exyunnanensis* Meinertzhagen⁴⁴ proposed to supplant Rippon's name is unnecessary.

115. TROCHALOPTERON AFFINIS OUSTALETI (Hartert)

Ianthocincla affinis oustaleti HARTERT, Die Vögel der paläarktischen Fauna, vol. 1, Heft 5, p. 633, 1909 (Tsekou, Yunnan).

One male, southwest Szechwan (Litang River Valley, 9,900 feet, Muli, April); four males and four females, northwest Yunnan (Likiang Mountains, 10,000 feet, January–February; mountains of Yungning, 12,000–13,000 feet, November–December; Ndamucho, 14,000 feet, October).

With a larger series of *T. a. blythi* before me than I formerly had available,⁴⁵ the only constant difference between it and *T. a. oustaleti* seems to be the absence of the gray patch on the sides of the neck of the former. Just where the two forms meet, I do not know, but it must be somewhere in the mountains of western Szechwan.

⁴³ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 24, 1926.

⁴⁴ Ibis, 1928, p. 510.

⁴⁵ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 24, 1926.

116. TROCHALOPTERON STYANI Oustalet

Trochalopteron styani OUSTALET, Bull. Mus. Paris, vol. 4, p. 226, 1898 (Tatsienlou, Szechwan).

One male and five females from southwest Szechwan (Muli Mountains, 10,000 feet, June; Noön Valley, 10,000 feet, east of Muli, August); two males, three females, and one unsexed, northwest Yunnan (Fuchuan Shan, 10,000–12,000 feet, September; Weihsi, 11,000 feet, September; Ndamucho, 14,000 feet, October).

These agree with specimens previously reported upon from Yunnan.⁴⁶

117. FULVETTA STRIATICOLLIS YUNNANENSIS (Rothschild)

Proparus striaticollis yunnanensis ROTHSCHILD, Bull. Brit. Orn. Club, vol. 43, p. 11, 1922 (Mekong-Salwin Divide, Yunnan).

One male and one female, mountains of Kulu, 11,000 feet, December; one male and one female, Muli, 10,500 feet, December; one male, Muli Mountains, 10,000 feet, June; two males and one female, Mount Mitzuga, Muli, 12,000–14,500 feet, June; one female and one unsexed, Djishigotong, Yalung Basin, 13,000 feet, July; all in Szechwan.

Two females and one unsexed from Sungpan, northwest Szechwan (all poor specimens), taken in July, when compared with the above series appear to be not very different. The streaks on the throat and nape are sparser and the brown on the inner primaries is not quite so bright and pronounced in the northern specimens.

118. FULVETTA INSPERATA Riley

Fulvetta insperata RILEY, Proc. Biol. Soc. Washington, vol. 43, p. 123, 1930 (Ndamucho, 14,000 feet, Yunnan).

The type and only specimen was secured at Ndamucho, 14,000 feet, Yunnan, October.

This specimen agrees with no described species of the genus so far as ascertained. It was described as follows:

Similar to *Fulvetta ruficapilla sordidior*, but pileum deep brownish drab, instead of light mars brown; no whitish around the eye; inner primaries and outer secondaries edged externally basally with buckthorn brown instead of sudan brown; rump and the base of the rectrices a much lighter brown; throat more heavily streaked with dusky; bill wholly black, instead of the base being lighter; feet considerably heavier.

Description.—Pileum deep brownish drab, bordered on each side above the superciliary line and commencing just over the eye, by a black line extending on to the upper back; the superciliary, lores, ear-coverts, and cheeks, light drab; throat pale drab-gray with rather broad dusky streaks; chest and breast, light drab; belly a little lighter than the breast; flanks and under tail-coverts, buckthorn brown; back, hair-brown; lower back scapulars and rump,

⁴⁶ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 25, 1926.

buckthorn brown; tail, dark mouse gray, the outer feathers fringed externally basally with the color of the rump; wing-coverts deep mouse gray edged outwardly with the color of the rump; primaries and secondaries deep mouse gray, the four outer primaries edged outwardly with light olive-gray, the inner primaries, commencing with the seventh, and the secondaries edged externally basally with buckthorn brown; under wing-coverts and inner margins of the remiges basally, white; bill (in the skin) dull black; feet, blackish brown. Wing, 61; tail, 58; culmen, 9.5; tarsus, 24; middle-toe, 13 mm.

Remarks.—The U. S. National Museum contains eight specimens of *F. r. sordidior* and all of the specimens, that are unstained around the head, have a narrow white line above the eye and below it, but not meeting behind. *Fulvetta insperata* does not show a trace of an eye-ring. In *F. r. sordidior* the black line bordering the pileum on each side extends further forwards. Dr. Rock's men took both *F. r. sordidior* and the present bird at the same locality, otherwise I should have considered them only forms of the same species. This can hardly be *Fulvetta manipurensis* Grant from Manipur, though judging from the inadequate description of the original describer and that of Stuart Baker (*Fauna Br. Ind., Birds*, ed. 2, vol. I, 1922, p. 292) it is apparently closely related. The latter compares it with *F. vinipecta*, however, while *F. insperata* resembles *F. ruficapilla* more closely.

119. FULVETTA RUFICAPILLA SORDIDIOR (Rippon)

Proparus sordidior RIPPON, Bull. Brit. Orn. Club, vol. 13, p. 60, 1903 (Talifu, Yunnan).

One male and one unsexed, northwest Yunnan (Yulo, 7,000 feet, August; and Ndamucho, 14,000 feet, October); two males and one female, southwest Szechwan (Muli Mountains, 9,800–10,000 feet, June; Mount Mitzuga, Muli, 10,000 feet, June; and forests of Noön east of Muli, 10,500 feet, August).

A poor female specimen of *F. r. ruficapilla* from Wenchwan, Szechwan, taken in August is very close to the above female from Noön. The pileum in *ruficapilla* is brighter, more russet, and the checks are more strongly washed with a deeper and more vinaceous-drab.

120. FULVETTA VINIPECTA BIETI (Oustalet)

Alcippe (Proparus) bieti OUSTALET, Ann. Sci. Nat., ser. 7, vol. 12, p. 284, pl. 9, fig. 2, 1892 (Tatsienlou.)

Three males, seven females, and six unsexed specimens from Yunnan (Likiang Mountains, 10,000 feet, January–February and September; Luddü Mountains, 12,000–13,000 feet, August); three males and six females from southwest Szechwan (Muli, 10,500 feet, December; Mount Gibboh, 13,000 feet, Muli, May; Mount Mitzuga, 13,500 feet, Muli, June; Watogomba forests, 12,500 feet, Yalung watershed, July; forests of Bonti, east of Waerhdje, 12,500 feet, July; Zimi Valley, west of Waerhdje, 15,000 feet, August; Mundon, 13,000 feet, May).

In the report of a previous collection by Doctor Rock,⁴⁷ certain differences between this race and *Fulvetta v. vinipecta* were given.

⁴⁷ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 28, 1926.

Though in the main these remarks are correct and could even be expanded, there is one mistake; the crissum in *F. v. bieti* is deep olive-buff and in some specimens there is a slight wash of buffy on the belly, but in comparison with *Fulvetta v. vinipecta* this is hardly noticeable. In *F. v. bieti* the white superciliary extends forward to the bill, while in *F. v. vinipecta*, it does not extend forward of the eye. It would seem as if *Fulvetta bieti* should be given specific rank, except I have not examined specimens of all the races, but from descriptions they seem to be quite distinct.

121. LIOPARUS SWINHOII FORRESTI (Rothschild)

Fulvetta chrysolis forresti ROTHSCHILD, Bull. Brit. Orn. Club, vol. 46, p. 64, 1926 (Shweli-Salween Divide, Yunnan).

Five males and one female, Ndamucho, 14,000 feet, October.

The above series has been compared with a poor specimen (male) from Wenchwan and an unsexed specimen from Mount Omei, Szechwan, of *Lioparus s. swinhoii*. The Wenchwan bird is so poor that it may be disregarded, but it is much lighter in all its markings than the Mount Omei specimen and may represent a more northern race. The Yunnan series when compared with the Mount Omei specimen is not strikingly different. The Mount Omei bird is darker in all its markings and the throat is dull black; the throat in *forresti* is slaty gray with silvery-gray tips to the feathers. The auricular region in *forresti* is grayish; in the Mount Omei specimen of *swinhoii* it is silvery white. The chief difference between the two races lies apparently in the different color of the throat and auricular region.

In one specimen of *forresti* the whole throat is yellow like the breast instead of gray. It is marked as a male, but I think this is a mistake and that it is really a female. The specimen marked as a female has the lower throat tinged with yellow, but this color does not come as far forward as in the former. The works consulted, however, do not mention any difference in the sexes and the above differences may be due to age.

The differences between *L. chrysolis* and *L. swinhoii* are sufficiently great, in my opinion, to warrant keeping them apart as species.

122. ALCIPPORNIS NIPALENSIS YUNNANENSIS (Harington)

Alcippe fratercula yunnanensis HARINGTON, Bull. Brit. Orn. Club, vol. 33, p. 63, 1913 (Gyi-dzin-shan, east of Talifu, Yunnan).

One male and one female, Muli forests, 10,000 feet, May; one male, Muli Mountains, 10,000 feet, southwest Szechwan, June; one male, Shintsang, 11,000 feet, Yunnan. September.

The three specimens from southwest Szechwan when compared with two males and one female from northwest Yunnan are considerably paler on the back and lowerparts, especially the latter. This may be due to fading, as the three Szechwan birds were taken in May while the Yunnan specimens were taken in September, November, and March.

123. *MOUPINIA POECILOTIS SORDIDIOR* Rothschild

Moupinia poecilotis sordidior ROTHSCHILD, Nov. Zool., vol. 28, p. 36, 1921 (Likiang Range, Yunnan).

Two males and one female from Yunnan (Likiang Mountains, January–February, September, and October); six males, one female, and two unsexed from southwest Szechwan (Kulu Mountains, 11,000 feet, December; Muli Mountains, 10,000–11,000 feet, June; Zimi Valley, 15,000 feet, west of Waerhdje, August; Noön, 10,500 feet, east of Muli, August; Dshizhi, 13,500 feet, April).

This series is barely separable from four skins from western Szechwan (Sungpan, Wenchwan, Tashiang-lin Pass, Mount Omei). The superciliaries in *M. p. poecilotis* are whitish, not so grayish as *M. p. sordidior*; the cheeks more tinged with buffy. The throats in *M. p. poecilotis* are not a clearer white as formerly stated⁴⁸; this was a slip of the pen.

124. *SCHOENIPARUS DUBIUS GENESTIERI* (Oustalet)

Alcippe genestieri OUSTALET, Bull. Mus. d'Hist. Nat. Paris, vol. 3, p. 210, 1897 (Tsekou, Yunnan).

Three females, northwest Yunnan (Ndamucho, 14,000 feet, October; Yungning Plain, 9,500 feet, December); four males and one female, southwest Szechwan (Noön Valley, 10,500 feet, east of Muli, August).

In reporting upon an earlier collection⁴⁹ made by Doctor Rock in Yunnan, I recognized *Schoeniparus intermedius* as a very distinct race of *dubius*. Since then Lord Rothschild says that he and Doctor Hartert have reached the firm opinion that *intermedius* is nothing more than an immature stage of plumage of *genestieri*.⁵⁰

This has caused me to reexamine my series. All the specimens I then called *S. g. genestieri* are apparently birds of the year taken in June and August with a rusty cast above, especially on the wings and tail. I have never seen a very young bird of this species, but the young of *Schoeniparus brunneus olivaceus* is more rufous than the adult and it is logical to suppose it would be also in *genestieri*.

⁴⁸ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 29, 1926.

⁴⁹ Idem.

⁵⁰ Nov. Zool., vol. 33, p. 270, 1926.

125. LIOPTILA DESGODINSI (David and Oustalet)

Sibia desgodinsi DAVID and OUSTALET, Bull. Soc. Philom. Paris, ser. 7, vol. 1, p. 139, 1877 (Yerkalo, southwest Szechwan).

Seven males, four females, and one unsexed, northwest Yunnan (Likiang Mountains, September; Muli-Yungning border, 11,000 feet, August; Gawua Mountains, 11,500 feet, Yungning, April; Luddü Mountains, 12,000–13,000 feet, August; Ndamucho, 14,000 feet, October); four males and four females, southwest Szechwan (forests of Baude-Shaya, 12,000 feet, east of Muli, July; forests of Noön, 11,000 feet, east of Muli, August; between 'Tsoo and Kulu, 10,500 feet, December).

126. SIVA CYANOUROPTERA WINGATEI Grant

Siva wingatei GRANT, Bull. Brit. Orn. Club, vol. 10, p. 38, 1900 (Yunnan City).

Two males, five females, and one unsexed, northwest Yunnan (Shintsang, 11,000 feet, September; and Fuchuanshan, 10,000–12,000 feet, September).

All the above specimens, except two, have a primrose-yellow wash to the breast and belly; quite decided in two or three cases. I have examined four fall taken birds from southern Szechwan in similar plumage. This color seems to fade out even before winter, as several specimens taken at that season are without it.

127. SIVA STRIGULA YUNNANENSIS Rothschild

Siva strigula yunnanensis ROTHSCHILD, Nov. Zool., vol. 28, p. 40, 1921 (Likiang Mountains, Yunnan).

One male, Luddü Mountains, 12,000–13,000 feet, August; and two males and one unsexed, Ndamucho, 14,000 feet, October, both localities in northwest Yunnan.

The three October specimens are in deep fresh plumage; quite different from the faded summer dress.

128. MINLA IGNOTINCTA JERDONI Verreaux

Minla jerdoni VERREAUX, Nouv. Arch. Mus. Paris, vol. 6, Bull., p. 38, 1870 (Chengtü, Szechwan).

One female, upper slopes of the Fuchuanshan, 10,000–12,000 feet, Yunnan, September.

In 1926 Lord Rothschild⁵¹ gave a key to the races known to him at that time, but the allocation of *jerdoni* to the section, "breast white or cream," certainly does not agree with the series in the United States National Museum, which is quite an extensive one. All the males of *jerdoni* have the lowerparts mustard yellow, even the throat being suffused with this color, but in many specimens the throat is much lighter or even white. *Minla ignotincta mariae* LaTouche

⁵¹ Nov. Zool., vol. 33, p. 275, 1926.

from southeast Yunnan is not a well-marked race; the back is browner and the breast a much lighter yellow than *M. i. jerdoni*. I should amend the key to read as follows:

- | | |
|--------------------------------|-------------------|
| 1. Back olive | 2 |
| Back Mars brown | <i>ignotincta</i> |
| 2. Breast mustard yellow | <i>jerdoni</i> |
| Breast primrose yellow | <i>mariae</i> |

Stresemann⁵² has recently named a race, *Minla ignotincta sini*, from the Yaoschan, Kwangsi, but I have seen no specimens of it.

129. LIOTHRIX LUTEUS YUNNANENSIS Rothschild

Liothrix luteus yunnanensis ROTHSCHILD, Nov. Zool., vol. 28, p. 42, 1921 (Shweli-Salwin Divide, Yunnan).

Three females, Ndamucho, 14,000 feet, Yunnan, October.

When a report was published⁵³ on Doctor Rock's first collection from Yunnan and Szechwan, the United States National Museum possessed an inadequate series of *Liothrix luteus luteus*, and my remarks based upon a comparison of the present race with it are misleading and erroneous. Since then a large series of *L. l. luteus* has been acquired from Szechwan, and the differences between it and *L. l. yunnanensis* are not so pronounced as appeared at first. Instead of being more highly colored, *L. l. yunnanensis* is actually paler below, but above there is little difference. *L. l. yunnanensis* is a larger bird, but the chief difference between it and *L. l. luteus* lies in the color of the outer webs of the base of the outer primaries; in the latter they are much deeper, not the reverse as formerly stated.

In *L. l. yunnanensis* the yellow outer margin to the inner primaries is interrupted near the middle, while in *L. l. luteus* no such interruption occurs. *L. l. yunnanensis* is a well-marked race.

130. PTERUTHIUS AERALATUS RICKETTI Grant

Pteruthius ricketti GRANT, Bull. Brit. Orn. Club, vol. 14, p. 92, 1904 (south China).

Two unsexed specimens from the Yungning-Muli border, 11,000 feet, August; one female, upper slopes of the Fuchuanshan, 14,000 feet, Yunnan, October.

131. PTERUTHIUS XANTHOCHLORIS PALLIDUS (David)

Allotrius xanthochloris var. *pallidus* DAVID, Nouv. Arch. Mus. Paris, vol. 7, p. 14, 1871 (Frontiers of Kookonor).

One female, Shintsang, 11,000 feet, northwest Yunnan, September.

⁵² Journ. f. Orn., vol. 77, p. 333, 1929.

⁵³ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 32, 1926.

132. YUHINA NIGRIMENTUM INTERMEDIA Rothschild

Yuhina nigrimentum intermedia ROTHSCHILD, Bull. Brit. Orn. Club, vol. 43, p. 11, 1922 (Mekong-Salwin Divide, Yunnan).

Two males and one female, northwest Yunnan (Fuchuan Shan, 9,800 feet, September; and Shintsang, 11,000 feet, September).

This series of three specimens is paler below, with whiter throats, than the same number of *Y. n. nigrimentum* in the National Museum from Sikkim and Darjeeling. The National Museum has a series of seven specimens from Tseo Jia Keo, in Szechwan south of Suifu and just north of the Yunnan border, taken in March. The latter are paler than the three Yunnan specimens; more so, in fact, than the latter are from the Indian race. I have named this race *Yuhina nigrimentum quarta*.⁵⁴

133. YUHINA GULARIS GRISEOTINCTA Rothschild

Yuhina gularis griseotincta ROTHSCHILD, Nov. Zool., vol. 28, p. 42, 1921 (Shweli-Salwin Divide, Yunnan).

One female, Luddü Mountains, 12,000–13,000 feet, Yunnan, August.

This specimen is quite pale below, probably because of fading. Recently Doctor Graham sent in three males taken on Mount Omei, Szechwan; these were much paler than *griseotincta* and were named *Yuhina gularis omeiensis*.⁵⁵ A race has also been found in Tonkin and named *Yuhina gularis sordidior* Kinnear.⁵⁶ *Yuhina gularis yangpiensis* was originally named from Yangpi on the Talifu Road, western Yunnan, and has never been taken there since, but has been taken on Mount Victoria, Burma, in some numbers. I have never seen a specimen, but Rothschild⁵⁷ says it is darker on the back and more strongly washed below with rufous than *Yuhina gularis gularis*.

134. YUHINA OCCIPITALIS OBSCURIOR Rothschild

Yuhina occipitalis obscurior ROTHSCHILD, Nov. Zool., vol. 28, p. 42, 1921 (Likiang, Yunnan).

One male and six females, northwest Yunnan (forests west of Yungning, 13,000 feet, May; Luddü Mountains, 12,000–13,000 feet, August).

This series is very much worn and faded below.

135. YUHINA DIADEMATA DIADEMATA Verreaux

Yuhina diademata VERREAUX, Arch. Mus. Paris, vol. 5, Bull., p. 35, 1869 (Mupin).

⁵⁴ Proc. Biol. Soc. Washington, vol. 43, p. 134, 1930.

⁵⁵ *Idem*.

⁵⁶ Bull. Brit. Orn. Club, vol. 45, p. 74, 1925.

⁵⁷ Nov. Zool., vol. 33, p. 276, 1926.

A good series from northwest Yunnan (Likiang Mountains, January–February, September, and October; summit of Yuli watershed, 13,000 feet, May; Ndamucho, 14,000 feet, October); two males and three females from Szechwan (Muli Mountains, 10,000 feet, June; Noön, east of Muli, 10,500 feet, August; Yanwekong Valley, 10,000–12,000 feet, May).

This series compared with a small series taken at the same time of the year from farther north in Szechwan is slightly darker on an average, but there are individual specimens that seem to be identical. It seems to me that the differences are too slight to recognize by name. If *Yuhina ampelina* Rippon is worthy of recognition at all, it will have to be restricted to western Yunnan and the Burma border. Rothschild⁵⁸ says that some fresh unworn specimens of *ampelina* are almost sooty black, but he seems to be somewhat in doubt as to the Yunnan bird from farther east. None of the above series is as dark as one would be led to expect from his remarks. No specimens are available for comparison from the type locality of *ampelina*.

Family PYCNONOTIDAE, Bulbuls

136. MICROSCELIS LEUCOCEPHALUS (Gmelin)

Turdus leucocephalus GMELIN, Systema naturae, vol. 1, pt. 2, p. 829, 1789 (China).

Six males and five females, northwest Yunnan (forests west of Yungning, 12,000 feet, May; Luddü Mountains, 12,000–13,000 feet, August; Yulo, 7,000 feet, August; Shintsang, 11,000 feet, September); three males and six females, southwest Szechwan (Litang River Valley, Muli, 10,000 feet, May; mountains of Muli, 10,000 feet, June; Muli Valley, 10,000 feet, June; forests of Noön, east of Muli, 10,500 feet, August).

All the phases of plumage, except the entirely black, are represented in the above series. Three of the specimens are dark neutral gray above, the pileum shining black, the lowerparts a much lighter gray than the back, the middle of the breast and the belly with white markings on the feathers forming a line; two of the specimens are getting a few white feathers on the forehead. All three are evidently immature, assuming the first adult plumage; the two with white on the foreheads taken in May, the other in September. Three immatures with considerable of the brownish juvenal feathers still remaining were taken in August. All three are molting into a black plumage above; one into a black plumage below, but another into a gray one below. All three, however, have the feathers of the center

⁵⁸ Nov. Zool., vol. 32, p. 277, 1926.

of the breast and belly with white markings, forming a line down the center.

I have nothing to add to my former remarks.⁵⁹ I would suggest, however, that the black-breasted white-headed and gray-breasted white-headed birds might belong to different sexes. The sexing of the specimens available is too unreliable to prove this, however.

137. *SPIZIXOS CANIFRONS* Blyth

Spizixos canifrons BLYTH, Journ. Asiat. Soc. Bengal, vol. 14, p. 571, 1845 (Cherra Punji).

Two males and two females, northwest Yunnan (Gauwua, 11,000 feet, January; Luddü Mountains, 12,000–13,000 feet, August; Likiang Mountains, September); four males, one female, and one unsexed, southwest Szechwan (Muli Mountains, 10,000 feet, April and June; Noön, east of Muli, August).

138. *PYCNONOTUS XANTHORHOUS* Anderson

Pycnonotus xanthorhous ANDERSON, Proc. Asiat. Soc. Bengal, p. 265, 1869 (Manwyne, Yunnan).

Three males and four females, northwest Yunnan (Likiang Mountains, 10,000 feet, January–February; mountains of Yungning, 12,000–13,000 feet, November–December; Weihsi, 8,000–9,000 feet, September; Ndamucho, 14,000 feet, October); one male, southwest Szechwan (Noön, 10,500 feet, east of Muli, August).

Family CINCLIDAE, Dippers

139. *CINCLUS PALLASII SOULIEI* Oustalet

Cinclus pallasii var. *souliei* OUSTALET, Ann. Soc. Nat., Zool., ser. 7, vol. 12, p. 299, 1891 (1892) (Tatsienlou and Mupin).

One female, Noön Valley, 11,000 feet, east of Muli, southwest Szechwan, August.

140. *CINCLUS CINCLUS BEICKI* Meise

Cinclus cinclus beicki MEISE, Orn. Monatsb., vol. 36, p. 138, 1928 (Langs-tang-scui-schlucht, north Kansu).

Two males, southwest Szechwan (Djago, 10,400 feet, December, and Yetsi Valley, 12,000 feet, April).

These two specimens are grayer on the back without the brownish wash, darker on the pileum and hind neck and much darker on the breast than *Cinclus cinclus cashmeriensis*. In these two specimens each feather on the back is outlined with a black border. Though this occurs also in *cashmeriensis*, it is not so pronounced. A male

⁵⁹ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 21, 1926.

from the Likiang Mountains, Yunnan, and a female from Sungpan, Szechwan, are somewhat lighter than the two specimens listed above, especially the male from Yunnan, which has the pileum and hind neck much lighter, more like Kashmir specimens, but it is quite worn. On geographic grounds these birds should belong to *Cinclus cinclus szetschwanensis* Meise,⁶⁰ but Mr. Bangs informs me that this is a synonym of *beicki*. I have examined no specimens from Kansu.

Family TROGLODYTIDAE, Wrens

141. SPELAEORNIS ROCKI Riley

Spelaeornis rocki RILEY, Proc. Biol. Soc. Washington, vol. 42, p. 214, 1929 (mountains of Hofuping, Mekong Valley, Yunnan).

One female, west of Yungning, 13,000 feet, May, and one male, Ndamucho, 14,000 feet, northwest Yunnan, October.

During a previous expedition to Yunnan, Doctor Rock collected the type. This was originally assigned to *Spelaeornis souliei* as possibly representing a young plumage.⁶¹ Later Doctor Rock sent in the female from west of Yungning, which, while differing from the type in minor details, evidently belongs to the same species. As these two specimens differed materially from the figure of the type of *Spelaeornis souliei* given by Hartert,⁶² and the supposition that they were young plumages of that species could no longer be maintained, it was described as new as follows:

Pileum argus brown, each feather rather broadly tipped with black and with a rather large sub-apical white spot; upper-parts sudan brown, each feather tipped narrowly with black and with a small triangular buffy-white spot; cheeks and sides of neck a little lighter than the back, with buffy shaft streaks, the feathers with narrow black tips; the feathers around the eye white posteriorly; throat and jugulum white; breast, sides and flanks ochraceous-tawny, the feathers of the breast and abdomen with rather broad white shaft-streaks and rather narrow black tips; the flanks with a few narrow white shaft-streaks, the under tail-coverts a little darker than the flanks, each feather with a sub-apical white bar and black tip; wing-coverts deep mouse gray with a brownish wash with a few white shaft-streaks and barred with black; flight feathers snuff brown rather broadly barred with black; tail snuff brown with narrow, irregular black bars; the upper mandible fuscous-black; the lower mandible chamois (in the skin). Wing, 48; tail, 50; culmen, 10; tarsus, 20; middle-toe, 13 mm. The specimen from west of Yungning, 13,000 feet, Yunnan, May, 1928 (U. S. Nat. Mus. No. 312284), differs from the type in having the forehead more profusely spotted with white; the white sub-apical spots and black tips to the feathers of the pileum smaller; the basal color of the crown and occiput of the same color as the back; below, the white of the jugulum extends down the center of the breast, the black apical spots are obsolescent, and the white shaft-streaks on the flanks have almost disappeared. It measures: Wing, 47.5; tail, 50.5; culmen, 10.5; tarsus, 19.5; middle-toe, 12 mm.

⁶⁰ Orn. Monatsb., vol. 36, p. 139, 1928.

⁶¹ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 33, 1926.

⁶² Nov. Zool., vol. 17, pl. 7, fig. 1, 1910.

On Doctor Rock's return from his second Yunnan expedition for the National Geographic Society, he brought back the third specimen of this species received by the United States National Museum, namely, the male from Ndamucho. Above this specimen is similar to the Yungning female mentioned before, but below the white does not extend so far down the breast. It measures: Wing, 49; tail, 55; culmen, 11; tarsus, 19.5; middle toe, 13.5 mm.

Comparing *Spelaeornis rocki* with Hartert's figure of the type of *Spelaeornis souliei*, the former is lighter above with the black apical spots more conspicuous; the flanks are lighter and the black apical spots smaller; and the white of the throat extends down on the jugulum and breast. It seems strange that this species should occur so near the type locality of *Spelaeornis souliei*.

Doctor Rock informs me that he found this species to be rather common in more or less open country where it frequented low scrubby growth. On being approached, it came toward the collector until it was too close to shoot. Out of numerous birds shot, he was able to save only the two listed above.

142. NANNUS TROGLODYTES TALIFUENSIS (Sharpe)

Anorthura talifuensis SHARPE, Bull. Brit. Orn. Club, vol. 13, p. 11, 1902 (Gyidzin-shan, Yunnan).

Three males, two females, and one unsexed, northwest Yunnan (Likiang Mountains, 10,000–12,500 feet, January–February, March); two males and eight females, southwest Szechwan (back of Mount Mitzuga, 12,000 feet, Muli, June; Mount Mitzuga, 14,500 feet, June; Zimi Valley, 14,900 feet, west of Waerhdje, August; Raronki, 12,400 feet, Shouchu River Basin, August; Djago, 11,200–12,000 feet, April).

The present race and *Nannus troglodytes szetschuanus* from southern Szechwan, at least, are certainly very close, if not identical. It may be necessary to unite them when better material is available for study. A breeding bird from Tatsienlu almost, if not quite, matches breeding birds from the Likiang Mountains and Muli, in color and size. My series from northern and central Szechwan is poor, either taken in winter or immature, with one exception.

Family PRUNELLIDAE, Accentors

143. LAISCOPUS COLLARIS RIPPONI (Hartert)

Prunella collaris ripponi HARTERT, Die Vögel der paläarktischen Fauna, vol. 1, Heft 6, p. 766, 1910 (Gyidzin-shan, Yunnan).

One male and one female, northwest Yunnan (Likiang Mountains, 14,500–15,000 feet, January); 13 males, 11 females, and 5 im-

mature specimens, southwest Szechwan (Mount Konka, 16,500–17,000 feet, June and August; crags of Dzampe-Shoren, east of Waerhdje, 15,600 feet, July; Mount Gibboh, 13,000–14,000 feet, Muli, April; Barongomba, 11,000–12,000 feet, no date; Yulonghsi Valley, 13,000–16,000 feet, May; Chengtze, 14,500–15,900 feet, May).

Two females in worn plumage from near Tatsienlu, July, received from the Rev. David C. Graham, agree with the above series in wing measurement and without much doubt belong to the same form.

144. *PRUNELLA IMMACULATA* (Hodgson)

Accentor immaculatus HODGSON, Proc. Zool. Soc. London, 1845, p. 34 (Nepal).

One female and one unsexed, southwest Szechwan (Brüolo-kong Valley, 13,000–15,900 feet, May; and Chiu-lung-hsien, halfway between Muli and Tatsienlu, May).

145. *PRUNELLA RUBECULOIDES FUSCA* Mayr

Prunella rubeculoides fusca MAYR, Orn. Monatsb., vol. 35, p. 148, 1927 (Bamutang, 2 days' trip southwest of Bantang, Szechwan).

One male and one female, southwest Szechwan (Yulonghsi, 13,000–16,000 feet, May; and Yulinggong, 10 miles south of Tatsienlu, 11,000 feet, May).

These two specimens agree fairly well with a male from Choni, Kansu, and a female from the Kokonor near Radja. Both the Kansu and Szechwan specimens differ from three males and a female from Kashmir in being darker above, especially on the head; the throats are darker; and the breast is a deeper tawny. The Kashmir birds also have slightly longer wings. Bangs and Peters⁶³ intimate that the Szechwan bird is somewhat darker than that from northern Kansu and northeastern Tibet, but the two specimens listed above do not seem to uphold this view. If *Prunella rubeculoides beicki* Mayr is to be recognized at all, it seems to me it must be for a form more to the northwest in Kansu and probably Mongolia.

146. *PRUNELLA STROPHIATA MULTISTRIATA* (David)

Accentor multistriatus DAVID, Ann. Mag. Nat. Hist., ser. 4, vol. 7, p. 256, 1871 (Mupin).

Five males and one unsexed, northwest Yunnan (Likiang Mountains, 10,000–11,000 feet, January–February; Ndamucho, 14,000 feet, October); a good series of adults and young, southwest Szechwan (Mount Mitzuga, 13,500–14,500 feet, June; Mount Konka, 15,000–15,700 feet, June and August; forests of Bonti, east of Waerhdje, 12,500, July; forests of Raronki, north of Muli, 12,400 feet, August;

⁶³ Bull. Mus. Comp. Zool., vol. 38, no. 7, p. 355, 1928.

Ronopien region, Shouchu River Basin, 15,000 feet, August; Yulonghsi Valley, 13,000–16,000 feet, May; Minya Mountains, 14,500 feet, no date).

Five males from Sungpan are less heavily streaked on the breast, but the difference is slight and may be more apparent than real. The Sungpan skins are not in very good condition.

Family TURDIDAE, Thrushes

147. *HETEROXENICUS CRURALIS FORMASTER* Thayer and Bangs

Heteroxenicus cruralis formaster THAYER and BANGS, Mem. Mus. Comp. Zoöl., vol. 40, no. 4, p. 169, 1912 (Mount Washan, Szechwan).

One adult female, Likiang Mountains, Yunnan, October.

When I published a paper on Doctor Rock's first expedition to Yunnan for the National Geographic Society a series of this form was doubtfully identified as *Heteroxenicus sinensis*.⁶⁴ At that time there was no specimen of the latter in the United States National Museum, and I relied upon descriptions for identification. Since then I have seen the series in the Museum of Comparative Zoölogy, and the National Museum has acquired by exchange a pair of *H. sinensis* from the type locality. The Likiang specimens are entirely different, much larger and darker; about as different as two species well could be. The male of *sinensis* is dark plumbeous above; slate gray below; the throat, middle of the breast, belly, and under tail coverts tinged with white; lores slate color; superciliary white. The male of *formaster* is dusky slate blue above; the throat either dusky slate blue or bluish black; the breast dusky slate blue; the middle of the abdomen barely tinged with deep neutral gray; lores black; superciliary white. The females of the two species are quite distinct also. The female of *formaster* is rustier on the forehead and deeper colored above; the abdomen grayish; and there are many other differences, but size alone is sufficient.

The bird listed at the head of this account is not quite the same as the previous series from Yunnan. It is more olivaceous above and below and not so rusty on the forehead. It is a fall bird, while the previous series were taken in summer, and the difference may be seasonal.

The type of *Heteroxenicus cruralis laurentei* LaTouche⁶⁵ is now in the Museum of Comparative Zoölogy and has been kindly loaned to me by the authorities of that institution for comparison. Without much doubt it is the same as the birds I formerly identified as *H. sinensis*, and which is also the *H. sinensis* of Stuart Baker.⁶⁶ LaTouche overlooked Thayer and Bangs's description of *formaster*, and evidently Stuart Baker did also. It is very doubtful to my mind if

⁶⁴ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 30, 1926.

⁶⁵ Bull. Brit. Orn. Club, vol. 42, p. 29, 1921.

⁶⁶ Fauna of British India, Birds, ed. 2, vol. 2, p. 1924.

Heteroxenicus sinensis ranges as far to the westward as Yunnan, but if it does it belongs to a different species and has nothing to do with the *cruralis* group.

The single male of *H. sinensis* measures: Wing, 62.5; tail, 49; culmen, 12; tarsus, 28 mm. Five males of *H. c. formaster* measure: Wing, 68.5-73 (71.3); tail, 49-57 (51.9); culmen, 13-14 (13.5); tarsus, 31-33.5 (32 mm.). The type of *H. c. laurentei* measures: Wing, 71; tail, 50; culmen, 14.5; tarsus, 33 mm.

The female of *H. sinensis* measures: Wing, 62.5; tail, 49; culmen, 12; tarsus, 26.5 mm. Four females of *H. c. formaster* measure: Wing, 67-70 (68.8); tail, 44-47 (45); culmen, 12-13.5 (12.9); tarsus, 28.5-31 (29.9 mm.).

Thayer and Bangs in the original description of *H. c. formaster*, cited above, give the measurements of the male as: Wing, 73; tail, 47; culmen, 14; tarsus, 34 mm.; and of the female as: Wing, 70; tail, 45; culmen, 13; tarsus, 32.5 mm.

148. MYOPHONUS EUGENEI Hume

Myiophonus eugenei HUME. Stray Feathers, vol. 1, p. 475. 1873 (Pegu).

Five males and one female, northwest Yunnan (Likiang Mountains, October; forests of Gowa, 10,000 feet, May; Fuchuan Shan, 10,000-12,000 feet, September; Ndamucho, 11,000 feet, October); one male and three females, southwest Szechwan (Shouchu Valley, near Dzeru, 11,300 feet, August; Mutirong, 7,000-7,800 feet, Muli, April; Chiu-lung-hsien, halfway between Muli and Tatsienlu, May; Tatsienlu, 9,500-10,000 feet, May).

Lord Rothschild⁶⁷ now regards this as a species, as he says that in certain areas *temminckii* and *eugenei* occur together. In the quite extensive series of the latter in the United States National Museum from western China, there are no intermediates between it and *temminckii*. *Myiophonus c. caeruleus* and its western form *immansuetus* are so distinct from *eugenei* and *temminckii* that hybrids between them must be very rare, though Lord Rothschild says there are hybrids between *temminckii* and *caeruleus*. This must be exceptional, however, because I am not aware that the ranges of the two latter meet at any point. Hybrids between *eugenei* and *temminckii* are not so surprising, as their ranges must meet at a number of points.

149. GRANDALA COELICOLOR FLORENTES Bangs

Grandala coelicolor florentes BANGS, Proc. New England Zool. Club, vol. 9, p. 78. 1926 (Tachienlu, Szechwan).

Thirteen adult males, two immature males, and nine adult females, southwest Szechwan (Mount Konka, 16,500-17,000 feet, June and

⁶⁷ Nov. Zool., vol. 33, p. 256. 1926.

August; Yulonghsi Valley, 13,000–16,000 feet, May; Briiolo-kong Valley, 13,000–15,900 feet, May; Chengtze, 14,500–15,900 feet, May; Chüichulongba Valley, 13,000–14,000 feet, no date; valley of Jesi-longba, 14,500–16,000 feet).

This series of males is even a lighter, brighter blue than in the two males previously reported upon from Yunnan.⁶⁸ Indian males are a darker, dingier blue. The female of *florentes* is darker than the same sex of *coelicolor*; the shaft spots of the lowerparts and on the head, neck, and upper back are narrower and more of a pale olive-buff in *florentes*, rather than the pinkish buff in *coelicolor*. It is rather astonishing to find the female when adult retaining the plumage of the young.

The two immature males are exactly like the adult female, except they are assuming the blue of the adult on the belly, lower back, and lesser wing coverts; they have already acquired the black tail and all the primaries are new or in growth, except the spurious and the second one; the secondaries are new internally, old externally; the greater wing coverts and primary coverts have been renewed; the middle coverts and the alula have not been renewed yet. These two young were taken in August.

150. LARVIVORA BRUNNEA BRUNNEA Hodgson (?)

Larvivora brunnea HODGSON, Journ. Asiat. Soc. Bengal, vol. 6, p. 102. 1837 (Nepal).

One female, Likiang Mountains, Yunnan, October.

It is with a good deal of hesitation that I assign the above specimen to this form. It does not agree with two females from the same locality previously listed as of this race.⁶⁹

It is darker above and below, but this may be due to the different season of the year at which it was secured. The under tail coverts are ochraceous-buff instead of white. It has a smaller bill, culmen 12 mm., instead of 13 mm. It is extremely doubtful if it belongs to *brunnea* at all, but it apparently belongs to this genus and there are no other species to which to assign it. It would not be advisable to name it on the material at hand.

151. IANTHIA RUFILATA PRACTICA Bangs and Phillips

Ianthia practica BANGS and PHILLIPS, Bull. Mus. Comp. Zoöl., vol. 58, p. 292, 1914 (Loukouchai, Yunnan).

Two males and seven females, northwest Yunnan (Likiang Mountains, October and January–February; Mbayiwua, 10,000 feet, Yangtze loop, April; Gou-khü-ko, 13,000 feet, Yangtze loop, April;

⁶⁸ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 35, 1926.

⁶⁹ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 39, 1926.

Ndamucho, 14,000 feet, October); two males, eight females, and two spotted young, southwest Szechwan (Mount Konka, 14,500 feet, June; Zimi Valley, 15,000 feet, west of Waerhdje, August; forests of Bonti, 12,500 feet, July; Dshizhi, 13,500 feet, April; Aloching, 12,500-13,500 feet, Muli, April; Mutirong, 7,000-7,800 feet, Yalung Gorge, Muli, April).

The males seem to exhibit two color phases. One a cyanine blue above; the other marine blue. The former with the superciliary, rump, and lesser wing coverts very dark; the latter with these areas much lighter. Both styles of coloration were taken at Mbayiwua.

152. *IANTHIA INDICA YUNNANENSIS* (Rothschild)

Tarsiger indicus yunnanensis ROTHSCHILD. Bull. Brit. Orn. Club, vol. 43, p. 10. 1922 (Likiang Range, Yunnan).

One male and one female, Ndamucho, 14,000 feet, northwest Yunnan, October; one male, valley above Djishi, 12,000 feet, southwest Szechwan, July.

Ianthia indica indica is not represented in the United States National Museum, but two adult males of the present race from farther north and east in Szechwan (Washan and south of Suifu) are considerably darker on the chest and outer margins of primaries than the two males listed above.

153. *HODGSONIUS PHOENICUROIDES PHOENICUROIDES* (Gray)

Bradypterus phoenicuroides GRAY, Catalogue of the specimens of Mammalia and Birds of Nepal and Thibet, presented by B. H. Hodgson to the British Museum, ed. 1, pp. 70, 153, 1846 (Nepal).

Two males and one female, northwest Yunnan (Likiang Mountains, October; and Luddü Mountains, 12,000-13,000 feet, August); four males and three females, southeast Szechwan (Yalung River Gorge below Reddo, 11,000 feet, July).

Two of the specimens listed above as females are much darker above and below than the two that are undoubted females. One of these birds is acquiring blue feathers on the forehead, lesser wing coverts, and sides of neck on the right side. In both specimens the white is restricted below to the belly, and the bills are black to base or nearly so. It would appear as if these dark-colored specimens were really young males. If this is so, then the young male must molt from the spotted plumage of the juvenal dress into a plumage resembling the female, but darker. Other specimens of immature males from Szechwan in the National Museum seem to confirm this. In comparing females from widely separated localities due care should be taken to see that the specimens are correctly sexed. The undoubted females have the lower mandible light col-

ored at the base, while in the immature male in the female plumage the lower mandible is black to the base. At least the color of the bill seems to change before the adult plumage begins to be assumed.

154. *NOTODELA LEUCURA LEUCURA* (Hodgson)

Muscisylvia leucura HODGSON, Proc. Zool. Soc. London, 1845, p. 27 (Nepal).

One male, Litang River Valley, 10,000 feet, Muli, southwest Szechwan, June.

Only one male from Arbre Broye, South Annam, and one male from Margherita, North Assam, are available for comparison. In the Annam male the blue tinge to the upperparts and on the belly is more pronounced; the white area at the base of the tail is of greater extent; the bill and tail are longer than in the male from Muli. The Annam specimen measures: Wing, 97; tail, 85; culmen, 17; tarsus, 28.5 mm. The Muli male measures: Wing, 97; tail, 75; culmen, 15.5; tarsus, 28 mm. The north Assam male when compared with the Muli male has the black underlying color of the body not so deep, but with a grayish tinge; the blue cast above is also lighter. The Assam male measures: Wing, 93; tail, 72; culmen, 15; tarsus, 27.5 mm.

155. *TARSIGER CHRYSÆUS VITELLINUS* Stresemann

Tarsiger chrysaëus vitellinus STRESEMANN, Journ. f. Orn., 1923, p. 365 (Washan, Szechwan).

One male, Likiang Mountains, Yunnan, October; two males and three females, Mount Konka, 14,500 feet, June; one female, Mount Mitzuga, Muli, 13,000 feet, June; two males and one female, Djishi, northeast of Muli, 13,000 feet, July; two males and one female, Zimi region, west of Waerhdje, 14,800 feet, August; the four latter in southwest Szechwan.

The only Indian specimen that I have examined has the head and mantle much deeper in color (near medal bronze) and the lower parts, especially the throat and chest, a deeper cadmium yellow than any before me from Yunnan or Szechwan.

156. *RHYACORNIS FULIGINOSA FULIGINOSA* (Vigors)

Phoenicura fuliginosa VIGORS, Proc. Zool. Soc. London, 1831, p. 35 (Himalaya).

Three adult males, one immature male, and four females, northwest Yunnan (Likiang Mountains, 10,500–11,000 feet, September; Funkkou, 6,500 feet, Yangtze Gorge, May; Fuchuan Shan, 10,000–12,000 feet, September; Luddü Mountains, 12,000–13,000 feet, August; Ndamucho, 11,000 feet, October); six adult males and two adult females, southwest Szechwan (forests of Baude-Shaya, 12,500 feet, northeast of Muli, July; forests of Bonti, east of Waerhdje, July;

Noön forest, 10,500 feet, east of Muli, August; Mutirong, 7,000–7,800 feet, Muli, April; Yanwekong, 10,700 feet, May; Tatsienlu, 9,500–10,000 feet, May).

157. CHAIMARRHORNIS LEUCOCEPHALA (Vigors)

Phoenicura leucocephala VIGORS, Proc. Zool. Soc. London, 1830, p. 35 (Himalayas).

One male, one female, and one unsexed, northwest Yunnan (Likiang Mountains, October and February; Chütien, 6,500 feet, October); two males and one unsexed, southwest Szechwan (Mount Konka Chanandodji, 15,800 feet, August; Noön stream, 10,500 feet, east of Muli, August; Tatsienlu, 9,500–10,000 feet, May).

158. PHOENICURUS ERYTHROGASTER MAXIMUS Kleinschmidt

Phoenicurus erythrogaster maximus KLEINSCHMIDT, Abh. Ber. Mus. Tierk. Völkerk. Dresden, vol. 16, no. 2, author's separate, p. 8, 1923 (Janeti, Rombatsa, and Chuwo, Tibet); idem, 1924, p. 42.

One adult female, Likiang Mountains, 10,000 feet, January–February.

This specimen is considerably darker above and below than two females from Kashmir of *Phoenicurus erythrogaster grandis*. The Likiang female measures: Wing, 103; tail, 75; culmen, 15 mm. The two females from Kashmir, measure: Wing, 95–102; tail, 71–73; culmen, 12–12.5 mm. The present race was founded upon size alone. It would appear to have a somewhat larger bill, and, if the color difference pointed out above holds, it is well worthy of recognition.

159. PHOENICURUS AUROREUS (Pallas)

Motacilla aurea PALLAS, Reise durch verschiedene Provinzen des russischen Reichs, vol. 3, p. 695, 1776 (Selenka, Lake Baical).

One male, forests of Lapo-laze, 10,000 feet, Yunnan, May; one young in the spotted plumage, forests of Noön, east of Muli, 10,500 feet, August; and one male, Yanwekong, 10,700 feet, May, southwest Szechwan.

Though I am not now recognizing *P. a. leucopterus*, I am not sure but that eventually it will have to be done. All the specimens examined by me from the mountains of Szechwan and Yunnan appear to be darker below and on the head than the majority of the birds taken farther north. There appears to be little or no difference in size. The majority of the adult specimens from the mountains are nonbreeding birds, and some of these differences may be due to the unworn condition of the plumage. Stuart Baker⁷⁰ is wrong when he states that the species breeds only from Lake Baical

⁷⁰ Fauna of British India, Birds, ed. 2, vol. 2, p. 72, 1924.

eastwards to Korea, Japan, and northeast China. It breeds throughout the mountains of western China to Yunnan at least. Besides the spotted young recorded above, the United States National Museum contains this plumage from the mountains of Szechwan (Wenchwan, near Washan, and Mount Omei) and Yunnan (Likiang Mountains). There is also a specimen in the spotted plumage from Changshowkai, Hunan; this bird, however, is much lighter colored and may belong to another race. The young taken near Washan had barely left the nest and could hardly have wandered far.

160. PHOENICURUS SCHISTICEPS (Gray)

Ruticilla schisticeps GRAY, Catalogue of the specimens of Mammalia and Birds of Nepal and Thibet, presented by B. H. Hodgson to the British Museum, ed. 1, pp. 69, 153, 1846 (Nepal).

Eight males and 18 females from northwest Yunnan (Likiang Mountains, 10,000 feet, January–February; mountains of Yungning, 12,000–13,000 feet, November–December; Gou-khü-ko, Yangtze loop, 13,000 feet, April); three males and two females from southwest Szechwan (Muli Mountains, 10,000 feet, May; Mount Mitzuga, 13,000 feet, June; mountains of Kulu, 11,000–13,000 feet, December and April; Djago, 10,400 feet, December).

A series of seven males from Sungpan are as large as those from farther south. The wings of the Sungpan series of males measure: 83, 86.5, 81.5, 86, 84.5, 83, and 85 mm. The wings of the males from the Likiang Mountains measure: 83.5, 85.5, 85, 83, 88, and 87.5 mm. This agrees with the results obtained by Bangs and Peters,⁷¹ who do not regard *Phoenicurus schisticeps beicki* Stresemann as a valid race.

161. PHOENICURUS HODGSONI (Moore)

Ruticilla hodgsoni MOORE, Proc. Zool. Soc. London, 1854, p. 26, pl. 58 (Nepal).

Two males, Likiang Mountains, 10,000 feet, January–February; one male, mountains of Yungning, 12,000–13,000 feet, December; and two females, Ndamucho, 14,000 feet, October; all in Yunnan.

162. PHOENICURUS FRONTALIS Vigors

Phoenicura frontalis VIGORS, Proc. Zool. Soc. London, 1832, p. 172 (Himalaya).

Two males, Likiang Mountains, 10,000 feet, January–February; and October); six males, four females, and three young in the spotted plumage from southwest Szechwan (Muli Mountains, 10,000 feet, May; Mount Konka, 16,000 feet, June; back of Mount Mitzuga, 13,000 feet, Muli, June; Mount Gibboh, 13,000 feet, Muli, June; Raronki, Shouchu basin, 12,400 feet, Muli, August; Dshizhi, 13,500

⁷¹ Bull. Mus. Comp. Zoöl., vol. 68, p. 352, 1928.

feet, April; Yulonghsi Valley, 13,000–16,000 feet, May; Shangentze, 14,500 feet, May; Yulinggong, 11,000 feet, ten miles south of Tatsienlu, May).

Though a large series of specimens is available from China, only two adult males have been examined from the Himalayas. They are certainly very close to if not identical with some of the Chinese specimens in the same stage of wear, but the series is too small to decide the status of *P. f. sinæ*, especially as I have examined no typical specimens of the latter from Kansu. Rothschild⁷² says the Yunnan specimens do not differ from those from the Himalayas, and Bangs and Peters,⁷³ who examined Kansu specimens, doubt the existence of a northern race.

163. *SAXICOLA TORQUATA PRZEWALSKII* (Pleske)

Pratincola maura var. *przewalskii* PLESKE, Wissenschaftliche Resultate der von N. M. Przewalski nach Central-Asien unternommenen Reisen, Vögel, vol. 1, p. 46, pl. 4, figs. 1–3, 1889 (Kansu).

Six males and five females. Yunnan (Likiang Mountains, January–February and September; mountains of Yungning, 12,000–13,000 feet, November–December): two males, southwest Szechwan (Mutirong, 7,000–7,800 feet. Yalung Gorge. April; Yulonghsi Valley, 13,000–16,000 feet, May).

164. *SAXICOLA TORQUATA STEJNEGERI* (Parrot)

Pratincola rubicola stejnegeri PARROT, Verh. Orn. Ges. Bayern, vol. 8, p. 124, 1908 (Iterup and Jesso, Japan).

One male. Mutirong. Yalung Gorge. 7,000–7,800 feet, southwest Szechwan, April.

165. *RHODOPHILA FERREA HARINGTONI* (Hartert)

Oreicola ferrea haringtoni HARTERT, Die Vögel der paläarktischen Fauna, vol. 1, Heft 6, p. 711, 1910 (Lien-kiang bei Futschau, China).

Two adult males and one immature male, northwest Yunnan (Likiang Mountains, September; Yulo, 7,000 feet, August; and Luddii Mountains, 12,000–13,000 feet, August); one female, forests of Shaya, northeast of Muli, 14,300 feet, southwest Szechwan, July.

166. *MONTICOLA SOLITARIA PANDOO* (Sykes)

Petrocincla pandoo SYKES, Proc. Zool. Soc. London, 1832, p. 87 (western Ghats).

Four males, Likiang Mountains, Yunnan, September and October, 1928.

⁷² Nov. Zool., vol. 33, p. 252, 1926.

⁷³ Bull. Mus. Comp. Zool., vol. 68, p. 351, 1928.

One specimen (U.S.N.M. No. 312428) has the under tail coverts chestnut and a median bar of the same color on some of the feathers of the center of the breast.

167. *CALLIOPE TSCHIBAIEWI* Przewalski

Calliope tschebaiewi PRZEWALSKI, Mongol i strana Tangut, vol. 2, p. 44, pl. 9, fig. 1, 1876 (mountains of Kansu); Rowley's Ornithological miscellany, vol. 2, pt. 6, p. 180, pl. 54, fig. 1, 1877.

Seven males and four females, Mount Konka, 16,000 feet, June; seven males and three females, Mount Mitzuga, Muli, 15,000 feet, June; one male, forests of Raronki, Shouchu Basin, 14,200 feet, August; one male, forests of Bonti, 13,500 feet, east of Waerhdje, July; one immature in the spotted plumage, Mount Konka (Mount Chanandodji), 15,600 feet, August; one male and two females, Yulonghsi, 13,000–16,000 feet, May; all in southwest Szechwan.

168. *OREOCINCLA MOLLISSIMA MOLLISSIMA* (Blyth)

Turdus mollissimus BLYTH, Journ. Asiat. Soc. Bengal, vol. 11, p. 188, 1842 (Darjeeling).

One adult male, one adult female, and one young female, northwest Yunnan (Likiang Mountains, 10,000 feet, January–February; Ndamucho, 14,000 feet, October; and Chütien, 6,500 feet, October); one young not long from the nest, southwest Szechwan (forests of Raronki, 12,400 feet, Shouchu Basin, north of Muli, August).

169. *CICHOSELYS SIBIRICUS SIBIRICUS* (Pallas)

Turdus sibiricus PALLAS, Reise durch verschiedene Provinzen des russischen Reichs, vol. 3, p. 694, 1776 (Dauria).

One adult female, Likiang Mountains, Yunnan, October, 1928. Apparently the first record for Yunnan.

170. *TURDUS EUNOMUS* Temminck

Turdus eunomus TEMMINCK, Nouveau recueil de planches coloriées d'oiseaux, pl. 514, 1831 (Japan).

One female, gorges of Lautsolö, 10,000 feet, November, and one female, Likiang Mountains, 10,000 feet, January–February, both in northwest Yunnan.

171. *TURDUS ATROGULARIS* Temminck

Turdus atrogularis TEMMINCK, Manuel d'ornithologie, vol. 1, p. 169, 1820 (rarely in Austria and Silesia).

One adult male, Likiang Mountains, 10,000 feet, January–February.

In this specimen the tail feathers are suffused with ochraceous-tawny on the inner web on the underside; very pronounced on the

outer feather, where it shows from above also as an irregular blotch at the tip.

172. *TURDUS RUFICOLLIS* Pallas

Turdus ruficollis PALLAS, Reise durch verschiedene Provinzen des russischen Reichs, vol. 3. p. 694. 1776 (Dauria).

Eighteen males and seven females, northwest Yunnan (Likiang Mountains, 10,000–11,000 feet, January–February; Yungning Mountains, 12,000–13,000 feet, November–December; and Yungning Plain, 9,500 feet, November–December); three males and three females, southwest Szechwan (Muli, 10,500 feet, December; Mutirong, Muli, 7,000–7,800 feet, April; Vudju, south of Muli and Mount Gibboh, 10,000 feet, April; Yetsi Valley, 12,000 feet, one day north of Kulu, April).

173. *TURDUS GOULDII* (Verreaux)

Merula gouldii VERREAUX, Nouv. Arch. Mus. Paris, vol. 6, Bull., p. 34. 1870 (West Szechwan).

Three males and two females, northwest Yunnan (Likiang Mountains, 11,000 feet, January; Gauwua Mountains, 11,500 feet, Yungning April; Luddü Mountains, 12,000–13,000 feet, August); four males, three females, and one immature, southwest Szechwan (Muli Mountains, 11,000 feet, May; Mount Mitzuga, 12,000 feet, June; forests of Bonti, east of Waerhdje, 13,000 feet, July; forests of Dshizhi, 13,500 feet, April; Yetsi Valley, one day north of Kulu, 12,000 feet, April; Briülo-kong, 13,000–15,900 feet, May; Chüchulongba, 13,000–14,000 feet, no date).

A male from Mount Mitzuga (U. S. N. M. No. 312522) is very dark on the chest and flanks (somewhat darker than auburn), deepening on the breast and belly to dull black with auburn fringes to the feathers; the head and upperparts are somewhat darker than normal. In another male (U. S. N. M. 314332), the tips of the feathers of the mantle are tipped rather broadly with black. These are only abnormal, however.

There is no indication in the large series of this species in the United States National Museum of intergrades toward *castaneus*.

174. *TURDUS KESSLERI* (Przewalski)

Merula kessleri PRZEWALSKI, Mongol i strana Tangut, p. 62, pl. 10, 1876 (Kansu); Rowley's Ornithological miscellany, vol. 2, pt. 6, p. 199. 1877.

One male, Mount Mitzuga, 14,600 feet, Muli, June; one male, Yulonghsi, 13,000–16,000 feet, May; and one male, Chengtze, 14,500–15,900 feet, May, all in southwest Szechwan.

175. *TURDUS OBSCURUS* Gmelin

Turdus obscurus GMELIN, Systema naturae, vol. 1, pt. 2, p. 816, 1789 (east of Lake Baikal).

One male, Shintsang, 11,000 feet, Yunnan, September.

Family SYLVIIDAE, Old World Warblers

176. OLIGURA CASTANEOCORONATA DEJEANI (Oustalet)

Cryptolopha dejeani OUSTALET, Bull. Mus. Paris, 1896, p. 316 (Tatsienlu, Szechwan).

One female, back of Mount Mitzuga, 13,000 feet, Muli, southwest Szechwan, June.

Two males, and four females before me from China agree in being more olive-green above, the pileum lighter chestnut, and the lower-parts a lighter yellow than a single specimen examined from Sikkim. The Chinese specimens are considerably larger. The wings of the six Chinese specimens measure 52.5–56 mm. (54.7); the single Sikkim specimen, 47.5 mm.

177. SUYA CRINIGERA CATHARIA (Reichenow)

Prinia catharia REICHENOW, Orn. Monatsb., vol. 16, p. 13, 1908 (Ta-sieng-lu-ting, Szechwan).

Six males and one unsexed, southwest Szechwan (Mutirong, 7,000–7,800 feet, Muli, April).

The above series belongs with the birds that I formerly identified as *S. c. yunnanensis*.⁷⁴ This is not surprising, as the above locality is not so very far off across the Yangtze in the Yalung Gorge. A male from Ningyuanfu, Szechwan, in the National Museum, also seems to belong here. A male from Kiating has the margins of the feathers of the upperparts more brownish than in the Muli series, but it was taken late in June, and this difference may be seasonal. It matches a male from the Likiang Mountains taken in July. If *S. c. yunnanensis* is recognizable, it must be confined to western Yunnan and eastern Burma. The six males from Muli measure: Wing, 46–48 (47); culmen, 10.5–11 (10.7) mm.

178. CISTICOLA JUNCIDIS CURSITANS (Franklin)

Prinia cursitans FRANKLIN, Proc. Zool. Soc. London, 1831, p. 118 (between Calcutta and Benares).

One male, Yungning Plain, 9,300 feet, northwest Yunnan, May.

This specimen does not differ appreciably from birds from Shanghai, in size or color. I have examined only one bird from India, but Stuart Baker⁷⁵ assigns Yunnan birds to this race. If the eastern Chinese specimens belong to the same race, as the material in the United States National Museum seems to show, then *Calamanthella tinnabulans* Swinhoe^{75a} must become a synonym. The wing

⁷⁴ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 46, 1926.

⁷⁵ Fauna of British India, Birds, ed. 2, vol. 2, p. 422, 1924.

^{75a} Journ. Asiat. Soc. North China Branch, vol. 1, p. 225, 1859.

of the above specimen measures 51 mm. The wings of seven males from the vicinity of Shanghai measure 51–55 (53.3) mm. Since the above was written, Lynes's review of the genus *Cisticola*⁷⁶ has appeared, and he recognizes *tinnabulans* as the name to use for the breeding bird of southeast China, but on page 96 he says that in western Yunnan the birds fuse with the Burmese races.

179. *DUMETICOLA THORACICA THORACICA* Blyth

Dumeticola thoracica BLYTH, Journ. Asiat. Soc. Bengal, vol. 14, p. 584, 1846 (Nepal).

Four males and one female, southwest Szechwan (Mount Mitzuga, 13,000–15,000 feet, Muli, June; back of Mount Mitzuga, 13,500 feet, June; forests of Raronki, 14,200 feet, Shouchu Basin, August).

The above female practically lacks the dusky spots on the jugulum; there is another specimen (U. S. N. M., No. 297122) that approaches it from the Likiang Mountains. The female seems to have fewer spots on the jugulum, anyway, but they are rarely lacking.

180. *HOREITES BRUNNIFRONS UMBRATICUS* Baker

Horeites brunneifrons umbraticus BAKER, Bull. Brit. Orn. Club, vol. 44, p. 63, 1924 (Sheweli-Salwin Divide, Yunnan).

One male and one female, Mount Mitzuga, 13,000 feet, Muli, southwest Szechwan, June.

181. *HORORNIS MAJOR* (Moore)

Horeites major MOORE, Proc. Zool. Soc. London, 1854, p. 105 (Nepal).

One male, Mount Mitzuga, 13,500 feet, Muli, southwest Szechwan, June.

It measures: Wing, 65; tail, 50; culmen, 12 mm.

182. *HORORNIS ACANTHIZOIDES ACANTHIZOIDES* (Verreaux)

Abrornis acanthizoides VERREAUX, Nouv. Arch. Mus. Paris, vol. 6, Bull., p. 37, 1870 (mountains of Chinese Tibet).

One female, forests west of Yungning, 13,000 feet, Yunnan, May, and one female, Mount Gibboh, 13,000 feet, south of Muli, 13,000 feet, southwest Szechwan, August.

183. *SEICIRUS BURKII DISTINCTUS* (LaTouche)

Cryptolopha burkii distincta LATOUCHE, Bull. Brit. Orn. Club, vol. 32, p. 41, 1922 (Mengtz, Yunnan).

One adult male, Mount Mitzuga, 11,000 feet, Muli, June, and one immature male, Noön forests, east of Muli, 10,500 feet, southwest

⁷⁶ Ibis, suppl. no., Sept., 1930.

Szechwan, August; one adult, Fuchuanshan, 10,000–12,000 feet, Yunnan, September.

The wing of the adult male measures 53.5 mm. Two males from the Likiang Mountains, Yunnan, taken in May and August, measure: Wing, 54–55.5 mm.; one male, apparently of this race, from near Ningyuanfu, Szechwan, has the wing 50 mm. This is a slight extension northward of the breeding range. Just where the present race meets *valentini* is not known; the United States National Museum has breeding specimens of the latter from Mount Omei, near Washan, and Wenchwan, Szechwan, but they are probably not typical, as the wing measurement is not so great as that given by Bangs for the form.⁷⁷ Breeding birds are much lighter below than before the breeding season.

184. *SEICIRCUS BURKII VALENTINI* (Hartert)

Cryptolopha burkii valentini HARTERT, Die Vögel der paläarktischen Fauna, vol. 1. Heft 4, p. 497, 1907 (Taipaishan, Shensi).

Three males, one female, and one unsexed, Likiang Mountains, Yunnan, October.

These are evidently migrants from the north. Two of the adult males have a wing measurement of 63 and 61 mm.; the female, 57 mm. The foreheads of all are tinged with yellowish green.

185. *PHAEORHADINA FUSCATA ROBUSTA* (Stresemann)

Phylloscopus fuscatus robustus STRESEMANN, Abh. Ber. Mus. Tierk. Völkerk. Dresden, vol. 16, no. 2, p. 16, 1924 (Sungpan, Szechwan).

One male, Weihsi, 8,000–9,000 feet, northwest Yunnan, September.

This specimen is darker above and paler below than the form that migrates through eastern China. It is a bird of the year; the belly slightly tinged with very pale yellow and may not belong here at all, but I do not think it belongs with the east China form (*fuscata*).

186. *PHAEORHADINA AFFINIS* (Tickell)

Motacilla affinis TICKELL, Journ. Asiat. Soc. Bengal, vol. 2, p. 576, 1833 (jungles of Borabhum and Dholbum).

Five males and one female, southwest Szechwan (Mount Mitzuga, Muli, 12,500 feet, June; Mutirong, 7,000–7,800 feet, Muli, April; Yanwekong, 10,700 feet, May; Yulonghsi, 13,000–16,000 feet, May).

187. *PHAEORHADINA SUBAFFINIS* (Grant)

Oreopneuste subaffinis GRANT, Bull. Brit. Orn. Club, vol. 10, p. 37, 1900 (Pu-anting, southwest Kweichu).

One unsexed, Mutirong, 7,000–7,800 feet, Muli, southwest Szechwan, April.

⁷⁷ Proc. New England Zool. Club, vol. 11, p. 3, 1929.

188. OREOPNEUSTE ARMANDI (Milne-Edwards)

Abrornis armandi MILNE-EDWARDS, Nouv. Arch. Mus. Paris, vol. 1, Bull., p. 22, pl. 2, fig. 1, 1865 (north China).

Two females, northwest Yunnan (Likiang Mountains, October; and Fuchuanshan, 10,000–12,000 feet, September); one male and one female, southwest Szechwan (Mutirong, 7,000–7,800 feet, Muli, April; Chiu-lung-hsien, halfway between Muli and Tatsienlu, May).

189. PHYLLOSCOPUS TROCHILOIDES (Sundevall)

Acanthiza trochiloides SUNDEVALL, Physiographiska Sällskapets Tidskrift, vol. 1, p. 76, 1837 (Calcutta, India).

One female, Likiang Mountains, 11,000 feet, Yunnan, September. This specimen was taken with *P. magnirostris*, which it greatly resembles in color, but is smaller. It measures: Wing, 55; culmen, 10; tarsus, 19 mm.

Count Gyldenstolpe has recently shown⁷⁸ that *Phylloscopus lugubris* auct. and *Acanthiza trochiloides* Sundevall are the same.

190. PHYLLOSCOPUS REGULOIDES CLAUDIAE (LaTouche)

Acanthopneuste trochiloides claudiae LATOUCHE, Bull. Brit. Orn. Club, vol. 43, p. 22, 1922 (Mengtze, Yunnan).

Five males, three females, and two unsexed, northwest Yunnan (Likiang Mountains, September and October; Luddü Mountains, 12,000–13,000 feet, August; Fuchuanshan, 10,000–12,000 feet, September; Ndamucho, 14,000 feet, October); two males and six females, southwest Szechwan (Bonti, east of Waerhdje, 12,500 feet, July; forests of Baude, northeast of Muli, 13,000 feet, July; Noön forests, east of Muli, 10,500 feet, August).

The United States National Museum contains specimens of this race from as far north in Szechwan as Wenchwan taken in early August. Doctor Rock's specimens from southwest Szechwan taken in summer are also evidently breeding birds, and on a previous trip he took it in the breeding season in the Likiang Mountains, Yunnan. This would make it the breeding form over the high mountains of western China from northern Szechwan, at least, to northwest Yunnan.

191. PHYLLOSCOPUS MAGNIROSTRIS Blyth

Phylloscopus magnirostris BLYTH, Journ. Asiat. Soc. Bengal, vol. 12, p. 966, 1843 (Calcutta, India).

One male, three females, and one unsexed, northwest Yunnan (Likiang Mountains, September; forests of Gowa, 10,000 feet, May;

⁷⁸ Bull. Brit. Orn. Club, vol. 46, p. 47, 1925; and Arkiv för Zool., Band 19A, no. 1, p. 47, 1926.

and Luddü Mountains, 12,000–13,000 feet, August); seven males and three females, southwest Szechwan (Mount Mitzuga, 13,500 feet, Muli, June; Mount Konka, 14,000 feet, June; forests above Djishi, Yalung watershed, northeast of Muli, July; forests of Bonti, east of Waerhdje, 12,500 feet, July; and Tatsienlu, 9,500–10,000 feet, May).

The male (U. S. N. M. No. 314417) from Tatsienlu has a large yellowish-white partially concealed patch on the occiput. It is unique in a large series of the species in the National Museum.

192. *REGULOIDES PROREGULUS FORRESTI* (Rothschild)

Phylloscopus proregulus forresti ROTHSCHILD. Nov. Zool., vol. 28, p. 45, 1921 (Likiang Mountains, Yunnan).

One male, Likiang Mountains, Yunnan, September, and three males and one female from southwest Szechwan (Mount Gibboh, 13,000 feet, Muli, May; Mount Mitzuga, 13,000 feet, Muli, June; Mutirong, 7,000–7,800 feet, Muli, April).

The United States National Museum contains specimens of this race from as far north as Sungpan, Szechwan.

193. *REGULOIDES PULCHER PULCHER* (Blyth)

Phylloscopus pulcher BLYTH, Journ. Asiat. Soc. Bengal, vol. 14, p. 592, 1845 (Nepal).

One male and one female, Likiang Mountains, Yunnan, October; one male, Mount Konka, 14,500 feet, June; and one unsexed, Yanwekong Valley, 10,000–12,000 feet, May, southwest Szechwan.

I can not distinguish between breeding specimens taken in the Likiang Mountains, Yunnan, and at Sungpan, Szechwan. It may be that all Chinese records of this species should belong to *Reguloides pulcher vegetus* Bangs,⁷⁹ but for the present I am following Stuart Baker,⁸⁰ as no specimens from Nepal have been examined by me.

194. *REGULUS REGULUS YUNNANENSIS* Rippon

Regulus yunnanensis RIPPON, Bull. Brit. Orn. Club, vol. 19, p. 19, 1906 (Yangtze River, west Yunnan).

Six males and three females, Likiang Mountains, 10,000 feet, northwest Yunnan, January–February.

This dark race extends north as far as Sungpan at least, as the United States National Museum contains a male and two young from there.

195. *LEPTOPOECILE SOPHIAE OBSCURA* Przewalski

Leptopocile obscura PRZEWALSKI, Zapiski Imp. Akad. Nauk St. Petersburg, vol. 55, p. 80, 1887 (northeast Tibet).

Leptopocile henrici OUSTALET, Ann. Sci. Nat., ser. 7, vol. 12, p. 287, pl. 10, fig. 1, 1891 (Aktaroma, between Kurla and Lob-nor, Tibet).

⁷⁹ Proc. Biol. Soc. Washington, vol. 26, p. 95, 1913.

⁸⁰ Fauna of British India, Birds, ed. 2, vol. 2, p. 464, 1924.

Five males and seven females from southwest Szechwan (Mount Mitzuga, 14,500–15,000 feet, Muli, June; Mount Konka, 14,800–16,000 feet, June and August; forests above Djishi, 12,000 feet, July; forests of Raronki, 12,400 feet, north of Muli, August; Yulonghsi, 13,000–16,000 feet, May; Chengtze, 14,500–15,900 feet, May; Yanwekong, 10,700 feet, May).

This bird is so different in color from *Leptopoecile sophiae* that it seems to me it should be recognized as a species. Sex for sex it is much darker, and the blue of the rump is not so bright; the breast and belly are a vinaceous-brown with a blue wash instead of a pinkish buff. It is also smaller.

Family MUSCICAPIDAE, Flycatchers

196. *CULICICAPA CEYLONENSIS CALOCHRYSEA* Oberholser

Culicicapa ceylonensis calochrysea OBERHOLSER, Smithsonian Misc. Coll., vol. 76, no. 6, p. 8, July 16, 1923 (Quaymos, Tenasserim).

Culicicapa ceylonensis orientalis STUART BAKER, Bull. Brit. Orn. Club, vol. 44, no. 281, p. 11, Nov. 5, 1923 (Szechwan).

One male and two females, northwest Yunnan (forests of Gowa, 10,000 feet, May; Luddü Mountains, 12,000–13,000 feet, August; Fuchuanshan, 10,000–12,000 feet, September).

In the report upon Doctor Rock's previous collection from Yunnan,⁸¹ I assigned a single specimen from the Likiang Mountains to *Culicicapa ceylonensis orientalis* Baker, overlooking the fact that *Culicicapa ceylonensis calochrysea* Oberholser was an earlier name proposed for the same form. The United States National Museum now contains a fair series of this species from western Szechwan. These and the Yunnan specimens when compared with Tenasserim birds do not seem to differ racially in color or size.

197. *EUMYIAS THALASSINA THALASSINA* (Swainson)

Muscicapa thalassina SWAINSON, Natural history of flycatchers, Naturalist's Library, vol. 10, Ornithology, p. 252, 1838 (India).

One male, Likiang Mountains, September; and two females, Yulo, 7,000 feet, Yunnan, August.

198. *CYORNIS RUBECULOIDES GLAUCICOMANS* Thayer and Bangs

Cyornis tickelliae glaucicomans THAYER and BANGS, Bull. Mus. Comp. Zoöl., vol. 52, p. 141, 1909 (Tanswioyah, Hupeh, China).

One male, Muli Mountains, 10,000 feet, southwest Szechwan, May.

The above specimen has the lesser wing coverts a shining Venetian blue, but this seems to vary considerably in three males from Mount Omei; the wing measures 76 mm.

⁸¹ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 19, 1926.

199. NILTAVA SUNDARA DENOTATA Bangs and Phillips

Niltava sundara denotata BANGS and PHILLIPS, Bull. Mus. Comp. Zoöl., vol. 58, p. 280, 1914 (Mengtsze, Yunnan).

Three adult males, two immature males, and one immature female. northwest Yunnan (Likiang Mountains, October; Fungkou, 9,000 feet, May; Luddü Mountains, 12,000–13,000 feet, August; Fuchuan-shan, 10,000–12,000 feet, September); one adult male and one immature female, southwest Szechwan (Yanwekong, 10,000–12,000 feet, May; forests of Noön, east of Muli, 10,500 feet, August).

The two immature males and the two immature females are in the spotted plumage. The United States National Museum contains two additional immature males in the spotted plumage from Doctor Rock's first expedition in Yunnan. The immature males vary somewhat in plumage and are probably not quite the same age, though approximately so. Irrespective of the slight age variations in these immature males, they all have the blue tail like the adult. One specimen is acquiring a blue rump and has a few blue feathers on the nape and lesser wing coverts; the Mars-yellow breast is being acquired in the two lateral feather tracts; the remiges are new and are blue outwardly at the base only, brownish toward the tip. The adult male plumage evidently is acquired at the first molt, except for the remiges. The two immature females in the spotted plumage of apparently the same age as the above spotted immature males have the tail brown like the adult female; they also have the white jugular patch and the white belly of the adult female. None of the spotted males has the jugular patch or belly white, but fulvous. Now in these two spotted females the remiges are new and resemble those of the adult female. All these spotted young, whether male or female, have acquired the tail of the first winter plumage. The interesting point is that the sexes become differentiated at a very early stage. They are probably only similar in the nestling plumage and the series of young before me seems to indicate that the female even then differs from the male in having the jugular patch and belly white.

200. SIPHIA STROPHIATA Hodgson

Siphia strophinata HODGSON, Indian Rev., vol. 1, p. 651, 1837 (Nepal).

One male from northwest Yunnan (Yungning, 12,000 feet, May); three males and three females from southwest Szechwan (forests of Muli, 10,000 feet, May; forests of Djishigotong, Yalung Basin, northeast of Muli, 13,000 feet, July; Dshizhi, 13,500 feet, April; Yanwekong, 10,000–12,000 feet, May).

201. SIPHIA PARVA ALBICILLA (Pallas)

Muscicapa albicilla PALLAS, Zoographia Rosso-Asiatica, vol. 1, p. 462, 1811 (Dauria).

Four males and two females, Likiang Mountains, Yunnan, October and September.

202. DIGENEA TRICOLOR CERVINIVENTRIS Sharpe

Digenea cerviniventris SHARPE, Catalogue of birds in the British Museum, vol. 4, p. 460, 1879 (Manipur Hills).

One male, Likiang Mountains, Yunnan, October.

203. MUSCICAPULA SUPERCILIARIS ASTIGMA (Hodgson)

Muscicapa astigma HODGSON, in Gray's Zoological miscellany, p. 84, 1844 (Nepal).

Two males and one female from southwest Szechwan (Mount Mitzuga, 13,000 feet, Muli, June; forests of Shaya, northeast of Muli, July; forests above Baude, 12,500 feet, northeast of Muli, July); one female, Fuchuanshan, 10,000–12,000 feet, northwest Yunnan, September.

204. POLIOMYIAS HODGSONI (Verreaux)

Siphia hodgsoni VERREAUX, Nouv. Arch. Mus. Paris, vol. 6, Bull., p. 34, 1870 (Mountains of Chinese Tibet).

Six adult males, one adult female, and two immature males, southwest Szechwan (Mount Mitzuga, 13,000 feet, Muli, June; forests of Djishi, 11,000 feet, northeast of Muli, Yalung watershed, July; Mount Konka, 14,500 feet, August; Yulinggong, 10 miles south of Tatsienlu, 11,000 feet, May).

205. CHELIDORYNX HYPOXANTHA (Blyth)

Rhipidura hypoxantha BLYTH, Journ. Asiat. Soc. Bengal, vol. 12, p. 935, 1843 (Darjeeling, India).

One adult male and one unsexed from northwest Yunnan (forests of Yungning, 13,000 feet, May; Likiang Mountains, October); one male from southwest Szechwan (Djishigotong, Yalung River watershed, northeast of Muli, 12,500 feet, July).

206. HEMICHELIDON SIBIRICA ROTHSCHILDI Baker

Hemichelidon sibirica rothschildi BAKER, Bull. Brit. Orn. Club, vol. 43, p. 156, 1923 (Likiang Range, Yunnan).

One adult unsexed and one immature male, northwest Yunnan (Lapo-laze forests, 10,000 feet, May; Likiang Mountains, September).

The United States National Museum contains specimens of this race from as far north as Sungpan, Szechwan.

207. *HEMICHELIDON FERRUGINEA* Hodgson

Hemichelidon ferruginea HODGSON, Proc. Zool. Soc. London, 1845, p. 32 (Nepal).

One male and two females, southwest Szechwan (Mount Mitzuga, 12,000 feet, Muli, June; forests of Bonti, east of Waerhdje, 12,000 feet, July; Noön forest, 11,000 feet, east of Muli, August).

208. *RHIPIDURA ALBICOLLIS ALBICOLLIS* (Vieillot)

Platyrrhynchus albicollis VIEILLOT, Nouv. Dict. d'Hist. Nat., vol. 27, p. 13, 1818 (Bengal).

One female, Shintsang, 11,000 feet, northwest Yunnan, September; and one male, Muli Valley, 10,000 feet, southwest Szechwan, June.

These specimens are darker even than the three specimens previously reported upon from Yunnan,⁸² and are quite different from the only two Indian skins available for comparison. It probably represents an unnamed race.

Family MOTACILLIDAE, Wagtails, Pipits

209. *ANTHUS SPINOLETTA JAPONICUS* Temminck and Schlegel

Anthus pratensis japonicus TEMMINCK and SCHLEGEL, Fauna Japonica, Aves, p. 59, pl. 24, 1847 (Japan).

One male, Likiang Mountains, 10,000 feet, Yunnan, January–February.

This seems to be the first record for Yunnan.

210. *ANTHUS HODGSONI* Richmond

Anthus hodgsoni RICHMOND, in Blackwelder, Research in China, vol. 1, part 2, p. 493, 1907 (new name for *Pipastes maculatus* JERDON, preoccupied; Nepal).

Four females, northwest Yunnan (Luddü Mountains, 12,000–13,000 feet, August; Fuchuanshan, 10,000–12,000 feet, September; Ndamucho, 14,000 feet, October); one male and two females, southwest Szechwan (Djishi, 11,500 feet, northeast of Muli, July; Mount Gibboh, 13,000 feet, Muli, August; Mutirong, 7,000–7,800 feet, Muli, April).

The July specimen is in very worn plumage; the olive wash has almost entirely disappeared from the upperparts, a little only remaining on the outer surface of the wings. All species of this genus undergo great changes in plumage in the breeding season.

⁸² Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 19, 1926.

Partly on this account it is very difficult to make out geographic forms. I am quite in sympathy with Bangs and Peters's⁸³ conclusions in regard to the nonrecognition of *A. h. yunnanensis* and *A. h. berezowskii*. The majority of specimens in collections have been taken on migration; enough breeding birds have not been examined to reach any definite conclusions in regard to the status of the forms.

211. *ANTHUS ROSEATUS* Blyth

Anthus roseatus BLYTH, Journ. Asiat. Soc. Bengal, vol. 16, p. 437, 1847 (Nepal).

One adult male, Mount Mitzuga, 15,000 feet, Muli, June; one adult male, one immature male, and two immature females, Mount Konka, 16,000–16,500 feet, June and August; two males, Dshizhi, Muli, 13,500 feet, April; one male, Mutirong, Muli, 7,000–7,800 feet, April; two males, Briiolo-kong Valley, 13,000–15,900 feet, May; one male, two females, and one unsexed, Shangentze, 14,500 feet, May; one female, Chengtze, 14,500–15,900 feet, May; one male, Barongomba, 11,000–12,000 feet, no date; all the above localities in southwest Szechwan. Two males, Ndamucho, Yangtze-Mekong Divide, 14,000 feet, Yunnan, October.

212. *ANTHUS RICHARDI RICHARDI* Vieillot

Anthus richardi VIEILLOT, Nouv. Dict. d' Hist. Nat., vol. 36, p. 491, 1818 (France).

One female, Likiang Mountains, Yunnan, September.

213. *ANTHUS RICHARDI GODLEWSKII* (Taczanowski)

Agrodroma godlewskii TACZANOWSKI, Bull. Soc. Zool. France, 1876, p. 128 (south Dauria).

One male, Mount Gibboh, 13,000 feet, Muli, southwest Szechwan, August.

This specimen is much more richly colored, especially below, than the specimen listed above as *Anthus r. richardi*; the streaks on the chest are heavier; and the hind claw is shorter. It measures: Wing, 91; hind claw, 13 mm. A male and an unsexed specimen taken near Kiating, Szechwan, in worn breeding plumage, June 2 and 27, are in the United States National Museum. They both have short hind claws, measuring 13 mm. in the male and 11.5 mm. in the unsexed specimen, and belong to the present form. A female from Tabool, eastern Mongolia, August 9, three males and one female from Kansu (near Ningsia, May 7 and 19, to the vicinity of Lanchow, July 16, and Labrang, August 31) are also of the short-clawed form. Two males and one unsexed from the vicinity of Ningsia, Kansu, May 7, are of the long-clawed variety. Either the two forms occur together on migration or else the short-clawed variety is only an individual

⁸³ Bull. Mus. Comp. Zoöl., vol. 68, p. 368, 1928.

variation. I am inclined to the latter belief, but breeding material is lacking to show that the two forms occur together in summer.

214. BUDYTES CITREOLA WEIGOLDI (Rensch)

Motacilla citreola weigoldi RENSCH, Abh. Ber. Tierk. Völkenk. Mus. Dresden, vol. 16, no. 2, p. 55, 1924 (Sungpan, Szechwan).

One male (marked female), Mount Mitzuga, 12,000 feet, Muli, southwest Szechwan, June.

This specimen does not have the black of the back extending so far posteriorly as in typical specimens from Sungpan, but has the lower back and rump deep neutral gray. Three males of typical *weigoldi* from Sungpan are not so deep a sooty black as *calcarata*, and the rumps are more extensively neutral gray. *B. c. weigoldi* does not appear to differ in size from *B. c. calcarata*. The above specimen measures: Wing, 88; culmen, 14 mm.

215. BUDYTES CITREOLA CITREOLA (Pallas)

Motacilla citreola PALLAS, Reise durch verschiedene Provinzen des russischen Reichs, vol. 3, p. 696, 1776 (east Siberia).

One immature, not sexed, northwest Yunnan (Ndamucho, 14,000 feet, October); three males and one female, southwest Szechwan (Dshizhi, 12,000 feet, April; Briüolo-kong Valley, 13,000–15,900 feet, May; Tatsienlu, 9,500–10,000 feet, May).

The spring adults are evidently on their way to the breeding grounds farther north. The immature bird may not belong to this form. It is darker above than the only immature specimen of about the same age that I have been able to compare it with; the bill is equally small, however.

216. MOTACILLA CINEREA CASPICA (S. G. Gmelin)

Parus caspicus S. G. GMELIN, Reise durch Russland, vol. 3, p. 104, pl. 20, fig. 2, 1774 (Enzeli, Caspian Sea).

Five males, one female, and one unsexed, northwest Yunnan (Likiang Mountains, September and October; Fuchuanshan, 10,000–12,000 feet, September).

217. MOTACILLA LUGUBRIS LEUCOPSIS Gould

Motacilla leucopsis GOULD, Proc. Zool. Soc. London, 1837, p. 78 (India).

One male and two females, northwest Yunnan (Likiang Mountains, September and October; Fuchuanshan, 10,000–12,000 feet, September).

218. MOTACILLA LUGUBRIS ALBOIDES Hodgson

Motacilla alboides HODGSON, Asiat. Res., vol. 19, p. 191, 1836 (Nepal).

Five males and three females, northwest Yunnan (Likiang Mountains, January–February and September; Yungning Mountains,

12,000–13,000 feet, November–December; Ndamucho, 14,000 feet, October); one male, southwest Szechwan (Noön forests, east of Muli, 10,500 feet, August).

The single specimen from Ndamucho, Yunnan, though marked as a male is probably a female, as the bill is quite small, measuring 14 mm.

Family ENICURIDAE, Fork-tails

219. ENICURUS LESCHENAULTI SINENSIS Gould

Enicurus sinensis GOULD, Proc. Zool. Soc. London, 1865, p. 665 (Shanghai).

Two males and one female from northwest Yunnan (Likiang Mountains, 10,000 feet, January–February, and forests of Gowa, 10,000 feet, May); one male and one female, southwest Szechwan (Noön forests, east of Muli, 10,500 feet, August; and Vudju, 10,000 feet, south of Muli and Mount Gibboh, April).

Family LANIIDAE, Shrikes

220. LANIUS SPHENOCERCUS GIGANTEUS Przewalski

Lanius giganteus PRZEWALSKI, Zapiski Imp. Akad. Nauk St. Petersburg, vol. 55, p. 86, 1887 (Gelben River).

Two females, southwest Szechwan (Muli, 10,000 feet, December, and Bonti, 14,300 feet, July).

The above two females are larger and darker above than *L. s. sphenocercus*, and the chest and breast are a pale vinaceous-fawn. A few specimens of *L. s. sphenocercus* sometimes have a faint tinge of the latter color below, but as a rule they are more or less pure white on the chest and breast. The two Szechwan females measure: Wing, 137.5 and 139 mm.

The specimen taken in July is probably a breeding bird and comprises considerable extension of the range to the southward. It is probably a local breeding bird at high elevations in western China from western Kansu to southwest Szechwan and probably northwest Yunnan.

221. LANIUS TEPHRONOTUS (Vigors)

Collurio tephronotus VIGORS, Proc. Zool. Soc. London, 1831, p. 43 (Himalaya).

Four males, one female, and one unsexed, Yunnan (Likiang Mountains, January–February, September and May 8); five adult males, two adult females, and three immatures, southwest Szechwan (Mount Mitzuga, 12,000 feet, Muli, June; Djishi, 11,000 feet, Yalung basin, July; Muli-Yunnan border, 11,000 feet, August; Dshizhi, 13,500 feet, April; Yulonghsi, 13,000–16,000 feet, May; Brüolo-kong Valley, 13,000–15,900 feet, May; Yulinggong, 11,000 feet, May); one adult female, without locality.

Family STURNIDAE, Starlings

222. ACRIDOTHERES TRISTIS TRISTIS (Linnaeus)

Paradisea tristis LINNAEUS, Systema naturae, ed. 12, p. 167, 1766 (Philippine Islands, error; Calcutta).

One male, mountains of Yungning, 12,000–13,000 feet, November–December; and one male, Ndamucho, 14,000 feet, northwest Yunnan, October.

Family NECTARINIIDAE, Sun-birds

223. AETHOPYGA DABRYII DABRYII (Verreaux)

Nectarinia dabryii VERREAUX, Rev. Mag. Zool., p. 173, pl. 15, 1867 (Szechwan).

Two males and one female, Yunnan (Chinhaitze, Laposhan, 11,300 feet, May; Mbayiwua, 10,000 feet, April; Weihsi, 8,000–9,000 feet, September); 10 males and 3 females, southwest Szechwan (Vudju Mountains, south of Muli, 10,000 feet, May; back of Mount Mitzuga, Muli, 12,000 feet, June; Mount Mitzuga, 13,000 feet, June; Muli Mountains, 10,000 feet, June; forests of Baude-Shaya, 12,500 feet, northeast of Muli, July; Dshizhi, 13,500 feet, April; Shangentze, 14,500 feet, May; Yanwekong Valley, north of Wanzanron, 10,000–12,000 feet, May).

The specimen from Weihsi, though marked as a female, is probably a young male. The feathers of the chest are becoming faintly tinged with orange, and the base of the lower mandible for about two-thirds of its length is chamois. Possibly it may not belong to this species.

Family DICAIEIDAE, Flower-peckers

224. PACHYGLOSSA MELANOZANTHA Blyth

Pachyglossa melanozantha BLYTH, Journ. Asiat. Soc. Bengal, vol. 12, p. 1010, 1843 (Nepal).

Fourteen males and three females, northwest Yunnan (Likiang Mountains, 12,000 feet, September; Luddü Mountains, 12,000–13,000 feet, August; Yulo, 7,000 feet, August; and one immature male, southwest Szechwan (Noön forests, 10,500 feet, east of Muli, August).

225. DICAENUM IGNIPECTUM IGNIPECTUM (Blyth)

Myzanthus ignipectus BLYTH, Journ. Asiat. Soc. Bengal, vol. 12, p. 983, 1843 (Nepal and Bhutan).

Two males and five females from southwest Szechwan (Muli Mountains, 10,000 feet, June; Mount Mitzuga, Muli, 10,000 feet, June; forests of Noön, 11,000 feet, east of Muli, August).

Family ZOSTEROPIDAE, White-eyes

226. ZOSTEROPS PALPEBROSA SIMPLEX Swinhoe

Zosterops simplex SWINHOE, Ibis, 1861, p. 331 (Amoy, China).

One male and two females, Muli Mountains, 10,000 feet, southwest Szechwan, June; one male, Luddü Mountains, 12,000–13,000 feet, Yunnan, August.

Family FRINGILLIDAE, Sparrows

227. MYCEROBAS CARNIPES (Hodgson)

Coccothraustes carnipes HODGSON, Asiat. Res., vol. 9, p. 151, 1836 (Nepal).

One male and six females, Yunnan (forests of Gowa, 10,000 feet, south of Yuli, May; Likiang Mountains, 9,600–13,500 feet, January); eight adult males, one immature male, and four females, Szechwan (Mount Mitzuga, 13,000–13,500 feet, June; Brüolo-kong Valley, north of the Druduron Pass, 13,000–15,900 feet, May; Yulinggong, 10 miles south of Tatsienlu, 11,000 feet, May).

228. MYCEROBAS MELANOXANTHUS (Hodgson)

Coccothraustes melanoxanthus HODGSON, Asiat. Res., vol. 9, p. 150, 1836 (Himalayas).

One male from northwest Yunnan (forests of Gowa, 10,000 feet, south of Yuli, May); two males and two females from southwest Szechwan (Muli Mountains, 10,000 feet, June; Mount Mitzuga, 13,000 feet, Muli, June; back of Muligomba, 10,000 feet, Muli, June).

229. PERISSOSPIZA AFFINIS (Blyth)

Hesperiphona affinis BLYTH, Journ. Asiat. Soc. Bengal, vol. 24, p. 179, 1855 (Sikkim).

One male, southwest Szechwan (back of Mount Mitzuga, 13,000 feet, Muli, June); two males and four females. Yunnan (Likiang Mountains, 13,500 feet, January; Luddü Mountains, 12,000–13,000 feet, August).

230. PROCARDUELIS RUBESCENS SATURATIOR Rothschild

Procarduelis rubescens saturatior ROTHSCHILD, Bull. Brit. Orn. Club, vol. 32, p. 12, 1922 (Sheweli-Salwin Divide, Yunnan).

One adult male, Likiang Mountains, 10,000 feet, Yunnan, January–February; and one adult female, Mount Mitzuga, 13,000 feet, Muli, southwest Szechwan, June.

231. PROCARDUELIS NIPALENSIS INTENSICOLOR Baker

Procarduelis nipalensis intensicolor BAKER, Bull. Brit. Orn. Club, vol. 45, p. 92, 1925 (Mekong-Salwin Divide, Yunnan).

One adult male and two females, valley above Djobi, 12,000 feet, southwest Szechwan, July.

232. CARPODACUS MURATI Delacour

Carpodacus erythrinus murati DELACOUR, Bull. Brit. Orn. Club, vol. 47, p. 20, 1926 (Noug-Het, Laos).

One adult male, Weihsi, 8,000–9,000 feet, northwest Yunnan, September.

As this specimen was unlike any species of the genus known to me from China, I took it to be an unnamed form and forwarded it to Outram Bangs for his opinion. He has identified it as above and writes: "Your bird is just completing its autumnal molt. It is rather darker above than the run of the series and the back feathers have rather less brownish edges. All this may be due to the freshness of the plumage or it may not."

He also says that the Museum of Comparative Zoölogy has a series from southern Yunnan (Mengtsh). It apparently is only a winter visitor to southern Yunnan and Laos. Where it breeds is apparently unknown. The present record is the farthest north point from which it has been taken, so far as I am aware, and would seem to point to a breeding range in eastern Tibet or the high mountains of western Szechwan.

This bird is so very different from *Carpodacus erythrinus* or any of its known forms that I am of the opinion that it is really not a race of that species at all but a distinct species. In *C. murati* the pileum is near acajou red and the throat alizarine pink, while in *C. erythrinus roseatus* the pileum and throat are near spectrum red; the two birds are of about the same size, however. The above specimen of *C. murati* measures: Wing, 81; tail, 52; culmen, 12 mm.

It seems to me that the type of *Carpodacus laetissimus* Walton⁸⁴ from Chaksam, Tibet, should be compared with the present species.

233. CARPODACUS EOS (Stresemann)

Erythrina eos STRESEMANN, Orn. Monatsb., vol. 38, p. 75, 1930 (Sungpan, Szechwan).

Three males and five females from southwest Szechwan (Mount Mitzuga, 14,500 feet, Muli, June; Bonti, east of Waerhdje, 13,000 feet, July; Mount Konka, 15,700–16,000 feet, August; Shelän, 13,400 feet, Muli, April; Mundon, 13,000 feet, May; Chüchulongba Valley, north of Tanku, 13,000–14,000 feet, no date).

The wings of the three males measure 75, 75, and 75.5 mm.; the five females, 71.5, 72, 73, 73.5, and 73.5. The females of the present species and the same sex of *C. argyrophrys* are extremely hard to differentiate, and for the present their identification will have to depend upon size. The five females identified above as this species are certainly lighter below and less heavily streaked than the females

⁸⁴ Bull. Brit. Orn. Club, vol. 15, p. 93, 1905.

listed as *C. argyrophrys*, but whether these differences would hold in a larger series is problematical.

234. *CARPODACUS ARGYROPHRYS* Berlioz

Carpodacus argyrophrys BERLIOZ, Bull. Mus. Paris, ser. 2, vol. 1, no. 2, p. 131, 1929 (new name for *Carpodacus davidianus* Authors, not Milne-Edwards).

Three males and six females from southwest Szechwan (forests of Djishigotong, 12,500–13,000 feet, northeast of Muli, July; valley of the Yalung River above Reddo, 11,000 feet, July; forests of Bonti, east of Waerhdje, 13,000 feet, July; Raronki, Shouchu Basin, north of Muli, August; Yulonghsi Valley, 13,000–16,000 feet, May); one female, Yunnan (Mbayiwua, Yangtze loop, 10,000 feet, April).

Bangs and Peters⁸⁵ have recently given the differential characters between the present species and *Carpodacus pulcherrimus* (*eos* Stresemann), so they need not be repeated here. The wings of the three males measure 82–85 (83.7) mm.; the seven females, 80.5–83.5 (82).

235. *CARPODACUS THURA FEMININUS* Rippon

Carpodacus femininus RIPPON, Bull. Brit. Orn. Club, vol. 19, p. 31, 1906 (Yangtze River, west Yunnan).

Twenty-one males and nineteen females from southwest Szechwan (mountains of Kulu, 11,000–13,000 feet, December and April; Muli Mountains, 10,000 feet, May; Mount Gibboh, 13,000 feet, Muli, May; Mount Mitzuga, 13,000–15,500 feet, Muli, June; back of Mount Mitzuga, 14,500 feet, June; Mount Konka, 15,600–16,500 feet, June; Watogomba, Yalung watershed, 12,500 feet, July; Djishigotong, 12,500–13,500 feet, northeast of Muli, July; Chide, 14,500 feet, northeast of Muli, July; Bonti, east of Waerhdje, 12,500 feet, July; Ronapien, Shouchu Basin, north of Muli, August; Raronki, Shouchu Basin, 12,600 feet, north of Muli, August; Shelän, Muli, 13,400 feet, April; Aloching, north of Kulu, Muli, 12,500–13,500 feet, April; Briüolokong Valley, north of the Druduron Pass, 13,000–15,900 feet, May; Shangentze, base of Druduron Pass, 14,500 feet, May; Yanwekong Valley, north of the Wanzanron Pass, 10,000–12,000 feet, May); one male and one female, Likiang Mountains, 11,000 feet, Yunnan, January.

Three males from Kansu are lighter above and smaller than specimens from the mountains farther south. With more ample material than available when the Yunnan collection of Doctor Rock was worked up,⁸⁶ I now think that the breeding bird of western Szechwan as far north as Sungpan will have to be assigned to the southern form. The 3 males from Kansu have wings 80–82 (81.3) mm.; 6

⁸⁵ Bull. Mus. Comp. Zoöl., vol. 68, p. 374, 1928.

⁸⁶ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 57, 1926.

males from western Szechwan (near Tatsienlu, 2; Sungpan, 4), 84–86.5 (85.5); 18 males from southwest Szechwan (Muli or vicinity), 83–90 (86).

This brings up a complication in the name for the southern form, for Oustalet named *Carpodacus dubius* var. *minor* from Rata, Tibet, and Tatsienlu, Szechwan.⁸⁷ He gives the wing as 83 mm., and it may be that his type was only a migrant from farther north.

Males taken in winter are more of an old rose below without the carmine wash observable in breeding males, and the silvery pink shaft lines of the throat become much reduced by wear until they almost entirely disappear in July birds. This makes it necessary to use specimens taken at approximately the same season or in the same state of wear when comparing the various supposed geographic forms.

236. CARPODACUS EDWARDSII SATURATUS Blanford

Carpodacus saturatus BLANFORD, Journ. Asiat. Soc. Bengal, vol. 41, pt. 2, p. 168, pl. 8, 1872 (Tonglu).

One adult female, mountains of Yungning, 12,000–13,000 feet, Yunnan, November–December.

In a former paper⁸⁸ an unsexed specimen from the Tseh Chung Mountains, Mekong Valley, Yunnan, was referred doubtfully to *Carpodacus ripponi* (= *verreauxii*); this was a mistake. It is a female of the present form.

237. CARPODACUS RUBICILLOIDES RUBICILLOIDES Przewalski

Carpodacus rubicilloides PRZEWALSKI, Mongol i strana Tangut, vol. 2, 90, pl. 12, 1876 (mountains of Kansu); Rowley's Ornithological miscellany, vol. 2, p. 299, pl. 54, 1877 (translation).

Two males and one female, Yulonghsi, 13,000–16,000 feet, May; one female, Minya Mountains, east of Yulonghsi, 14,500 feet, Szechwan, no date.

The above have been compared with a single male from Kansu. The Szechwan males have slightly larger bills, and the plumules over the nostrils are whitish; the same color as the forehead (pomegranate purple) in the Kansu male.

238. CARPODACUS VERREAUXII (David and Oustalet)

Propasser verreauxii DAVID and OUSTALET, Les oiseaux de la Chine, p. 355, 1877 (Moupin).

Propasser ripponi SHARPE. Bull. Brit. Orn. Club, vol. 13, p. 11, 1902 (Gyi-dzinshan, West Yunnan). (See Berlioz, Bull. Mus. Paris, ser. 2, vol. 1, p. 129, 1929.)

⁸⁷ Nouv. Arch. Mus. Paris, ser. 3, vol. 6, p. 31, 1894.

⁸⁸ Proc. U. S. Nat. Mus., vol. 70, art. 5, p. 58, 1926.

One male and two females, Mount Mitzuga, 12,500–13,000 feet, Muli, southwest Szechwan, June; one male, Luddü Mountains, 12,000–13,000 feet, northwest Yunnan, August.

239. *CARPODACUS VINACEUS* Verreaux

Carpodacus vinaceus VERREAUX, Nouv. Arch. Mus. Paris, vol. 6, Bull., p. 39, 1870 (mountains of Chinese Tibet).

One adult female, forests of Shaya, northeast of Muli, 14,000 feet, southwest Szechwan, July; one adult female, Luddü Mountains, 12,000–13,000 feet, northwest Yunnan, August.

240. *CARPODACUS TRIFASCIATUS* Verreaux

Carpodacus trifasciatus VERREAUX, Nouv. Arch. Mus. Paris, vol. 6, Bull., p. 39, 1870 (mountains of Chinese Tibet).

One adult male, valley of Shenlä, Kulu-Djago, 12,000 feet, southwest Szechwan, December.

241. *PYRRHOSPIZA PUNICEA SZETSCHUANA* Bianchi

Pyrrhospiza punicea szetschuana BIANCHI, Bull. Acad. Sci. St. Petersburg, 1907, no. 6, p. 189 (southeast Kansu and northern Szechwan).

Thirteen males and twelve females from southwest Szechwan (Mount Mitzuga, 15,200–15,600 feet, Muli, June; Mount Konka, 16,000–16,500 feet, Muli, June; Mount Gibboh, 13,000–14,000 feet, Muli, April; Brüolo-kong Valley, north of Druduron Pass, 13,000–15,900 feet, May; Yankongran Pass, 15,500 feet, Muli, May; Chiprinla, 16,500 feet, July; Chengtze, 14,500–15,900 feet, May).

This series is being assigned to the above race upon geographic grounds. I have been able to compare it with *Pyrrhospiza punicea humii* from Kashmir and East Turkestan, from which it differs in being much darker above; the red below and on the rump deeper and more brilliant; and the bill is longer. Nine males from southwest Szechwan measure: Wing, 112–119 (115.7); culmen, 17.5–19.5 (18.3) mm. The 10 females: Wing, 104.5–112.5 (109.4); culmen, 18–19 (18.4) mm. This is a considerably longer culmen than Stuart Baker gives for *Pyrrhospiza punicea punicea* from Nepal, etc. *Pyrrhospiza punicea longirostris* was described from northwestern Kansu, the only definite locality mentioned in the translation of Przewalski⁸⁹ is Gadjur, a mountain near the Tatung, northeast of Sining. Bianchi⁹⁰ confines its range to the mountains of northeastern Tibet and the Sining Mountains, eastern Nanshan (Tetung Mountains). *Pyrrhospiza punicea szetschuana* was described from southeastern Kansu and northern Szechwan, but the only definite

⁸⁹ Rowley, Ornithological Miscellany, vol. 2, p. 304, 1877.

⁹⁰ Bull. Acad. Sci. St. Petersburg, no. 6, p. 191, 1907.

locality mentioned for Szechwan is Shih-nan-n'ei-wo, near Lungan. From descriptions alone, *longirostris* and *szetschuana* must be very similar. The present series was taken a long way south of the known range of *szetschuana* and it may not represent the race at all, but only a direct comparison can decide; something I am unable to do at present.

The Stötzner Expedition brought back five specimens of this race from Szechwan, but Jacobi,⁹¹ who reported upon the sparrows, does not seem to have been able to make a direct comparison with *Pyrrhospiza punicea* and recognizes no races at all. His measurements of the culmen of his specimens are smaller than those I obtain for the series before me.

242. *PROPYRRHULA SUBHIMACHALA INTENSIOR* Rothschild

Propyrrhula subhimachala intensior ROTHSCHILD, Bull. Brit. Orn. Club, vol. 43, p. 12, 1922 (Likiang Range, Yunnan).

One male and one female from northwest Yunnan (Fungkou, Yangtze Gorge, 6,500 feet, May; and Likiang Mountains, 10,000 feet, January–February); two females from southwest Szechwan (Mount Konka, 15,000 feet, Muli, June; Mount Gibboh, 13,000–14,000 feet, Muli, April).

243. *LOXIA CURVIROSTRA HIMALAYENSIS* Blyth

Loxia himalayensis BLYTH, Journ. Asiat. Soc. Bengal, vol. 13, p. 952, 1844 (Nepal).

Seven males, five females, and one unsexed, northwest Yunnan (Likiang Mountains, 10,000 feet, January–February; and Ndamucho, Yangtze-Mekong Divide, 14,000 feet, October); five males and three females, Barongomba, one day east of Baurong, 11,000–12,000 feet, Szechwan, no date.

Nine males measure: Wing, 85.5–90 (87.9); culmen, 15–17.5 (16.4) mm. Three females measure: Wing, 84–85.5 (84.7); culmen, 15–16.5 (16). The male and female from Ndamucho are smaller than the average in the series measured above. The male measures: Wing, 82; culmen, 15.5; the female: wing, 80; culmen, 14.5. Crossbills are known to vary considerably in size. Whether the two mentioned represent individual variation or a local race can not be decided at present with the material available.

244. *PYRRHULA ERITHACA ALTERA* Rippon

Pyrrhula altera RIPPON, Bull. Brit. Orn. Club, vol. 19, p. 19, 1906 (Shayang, west Yunnan).

Three males and one female from southwest Szechwan (Mount Mitzuga, 10,000–13,000 feet, Muli, June; Zimi Valley, 15,000 feet,

⁹¹ Abh. Ber. Mus. Dresden, vol. 16, no. 1, p. 29, 1923.

west of Waerhdje, August); one male and one female, Likiang Mountains, 12,500 feet, Yunnan, January.

245. *LEUCOSTICTE WALTERI* (Hartert)

Montifringilla brandti walteri HARTERT, Die Vögel der paläarktischen Fauna, vol. 1, Heft 2, p. 138, 1904 (Sungpan, Szechwan).

Five males and seven females, Jesila (three days' trip south of Tatsienlu) 15,600–16,330 feet, May; two males and seven females, Mount Konka, 16,000–17,000 feet, June, Szechwan.

This is not a typical member of the genus *Leucosticte* Swainson. The nasal plumules are not so dense or do not cover the nostrils so thoroughly. It has the same long wing tip, emarginated tail, and other characters of the genus, however.

Hellmayr,⁹² the latest author to review the races of *Leucosticte brandti*, makes the present bird only a race of that species, but it is so much darker in every way that, it seems to me, to make it a form of that species is to obscure these great differences; the rosy margins to the rump feathers in *walteri* are much reduced.

Mount Konka seems to be the most southern locality from which the species has been reported so far. The United States National Museum also has a series from the vicinity of Tatsienlu collected by the Rev. David C. Graham. The two series are essentially alike.

246. *FRINGALAUDA NEMORICOLA NEMORICOLA* Hodgson

Fringalauda nemoricola HODGSON, Asiat. Res., vol. 19, p. 158, 1836 (Nepal).

Two males, Mount Mitzuga, 14,500 feet, Muli, June; one male and two females, Mount Konka, 16,500 feet, June; two males, Mutirong, 7,000–7,800 feet, Muli, April; three males and two females, Yulonghsi, 13,000–16,000 feet, May; one female and one unsexed, south base of the Druduron Pass, 14,500 feet, May; two females, Minya Mountains, 14,500 feet, no date; all the above localities in western Szechwan.

All have the streaked heads of the adult plumage.

247. *SPINUS AMBIGUUS* (Oustalet)

Chrysomitris ambigua OUSTALET, Bull. Mus. Paris, vol. 2, p. 186, 1896 (Yunnan).

Thirteen adults, both sexes, from northwest Yunnan (Likiang Mountains, January–February, September, October, and November); one immature male in the streaked plumage from southwest Szechwan (Noön forests, 10,500 feet, east of Muli, August).

⁹² Field Mus. Nat. Hist. Publ. 263, Zool. Ser., vol. 17, no. 3, pp. 51–57, 1929.

248. *EMBERIZA ELEGANS ELEGANTULA* Swinhoe

Emberiza elegantula SWINHOE, Proc. Zool. Soc. London, 1870, p. 134 (near Kweichow, Hupeh).

One female, Mount Gibboh, Muli, 13,000 feet, August; two males, Likiang Mountains, 11,000 feet, January; and one female, Fuchuan-shan, 10,000–12,000, Yunnan, September.

249. *EMBERIZA PUSILLA* Pallas

Emberiza pusilla PALLAS, Reise durch verschiedene Provinzen des russischen Reichs, vol. 3, p. 697, 1776 (Daurian Alps).

One male, one female, and one unsexed, Likiang Mountains, 10,000 feet, January–February; one male and one female, Weihsi, 8,000–9,000 feet, September; one male and one female, Ndamucho, Yangtze-Mekong Divide, 11,000 and 14,000 feet, October; all in Yunnan.

250. *EMBERIZA SPODOCEPHALA MELANOPS* Blyth

Emberiza melanops BLYTH, Journ. Asiat. Soc. Bengal, vol. 14, p. 554, 1845 (Tipperah, India).

One male, Weihsi, 8,000–9,000 feet, Yunnan, September.

251. *EMBERIZA FUCATA ARCUATA* Sharpe

Emberiza arcuata SHARPE, Catalogue of birds in the British Museum, vol. 12, p. 494, 1888 (Himalayas).

One male and one unsexed, Weihsi, 8,000–9,000 feet, September.

252. *EMBERIZA GODLEWSKII YUNNANENSIS* Sharpe

Emberiza yunnanensis SHARPE, Bull. Brit. Orn. Club, vol. 13, p. 12, 1902 (Gyidzin-shan, west Yunnan).

Six males, one female, and one unsexed, northwest Yunnan (Likiang Mountains, 10,000–11,000 feet, January–February, and mountains of Yungning, 12,000–13,000 feet, November–December); four males, three females, and one immature female, southwest Szechwan (Muli Mountains, 10,000 feet, May; Shouchu River, Muli, 8,500 feet, June; forests of Raronki, 12,500 feet, north of Muli, August; Mutirong, Yalung Gorge, 7,000–7,800 feet, Muli, April; Yanwekong, 10,700 feet, May).

All these belong to the dark southern race.

253. *FRINGILLA MONTIFRINGILLA* Linnaeus

Fringilla montifringilla LINNAEUS, Systema naturae, ed. 10, p. 179, 1758 (Sweden).

Four males and two females from northwest Yunnan (Likiang Mountains, 10,000 feet, January–February; mountains of Yungning, 12,000–13,000 feet, November–December).

254. PASSER RUTILANS INTENSIOR Rothschild

Passer rutilans intensior ROTHSCHILD, Bull. Brit. Orn. Club, vol. 43, p. 11, 1922
(Mekong Valley, Yunnan).

Three males and one female, Yunnan (forests of Gowa, 10,000 feet, May; Ndamucho, Yangtze-Mekong Divide, 14,000 feet, October); three males, southwest Szechwan (mountains of Djago, 10,800 feet, Muli, June; Mutirong, Yalung Gorge, 7,000-7,800 feet. Muli, April; Baurong, 7,600 feet, July).

INDEX

- Abrornis acanthizoides*, 62.
 armandi, 64.
Acanthiza trochiloides, 64.
acanthizoides, *Abrornis*, 62.
 Horornis acanthizoides, 62.
Acanthopneuste trochiloides claudiae,
 64.
Accentor immaculatus, 50.
 multistriatus, 50.
Accentors, 49.
Accipiter melanoschistus, 8.
 nisus melanoschistus, 8.
 nisus nisosimilis, 8.
Accipitridae, 8.
Acredula bonvaloti, 29.
Acridotheres tristis tristis, 73.
Actitis hypoleucos, 13.
acuta, *Anas*, 7.
 Dafila acuta, 7.
Aegithaliscus bonvaloti, 29.
 concinus talifuensis, 29.
Aegithalos glaucogularis glaucogularis,
 29.
 glaucogularis vinacea, 28.
aemodium, *Conostoma aemodium*, 27.
aemodius, *Conostoma*, 27.
 Parus, 30.
 Periparus ater, 30.
Aethopyga dabryii dabryii, 73.
affinis, *Hesperiphona*, 74.
 Motacilla, 63.
 Perissospiza, 74.
 Phaeorhadina, 63.
Agrodroma godlewskii, 70.
Alauda arvensis weigoldi, 24.
 dukhunensis, 24.
 coelivox, 24.
 gulgula coelivox, 24.
Alaudidae, 23.
albicilla, *Muscicapa*, 68.
 Siphia parva, 68.
albicollis, *Rhipidura albicollis*, 69.
 Platyrrhynchus, 69.
albogularis, *Garrulax albogularis*, 34.
alboides, *Motacilla*, 71.
 Motacilla lugubris, 71.
albosuperciliaris, *Dryonastes sannio*,
 35.
Alcedinidae, 19.
Alcedo atthis bengalensis, 20.
 bengalensis, 20.
 pileata, 19.
Alcippe fratercula yunnanensis, 41.
 genestieri, 42.
Alcippornis nipalensis yunnanensis, 41.
Allotrius xanthochloris var. pallidus,
 44.
altera, *Pyrrhula*, 79.
 Pyrrhula erithaca, 79.
 ambigua, *Chrysomitris*, 80.
 ambiguus, *Spinus*, 80.
 amherstiae, *Chrysolophus*, 12.
 Phasianus, 12.
 ampelina, *Yuhina*, 46.
Anas acuta, 7.
 crecca, 8.
 ferruginea, 7.
 nyroca, 7.
 platyrhyncha platyrhyncha, 8.
 platyrhynchos, 8.
 querquedula, 7.
Anatidae, 7.
Anorthura talifuensis, 49.
Anthus hodgsoni, 69.
 hodgsoni berezowskii, 70.
 hodgsoni yunnanensis, 70.
 pratensis japonicus, 69.
 richardi godlewskii, 70.
 richardi richardi, 70.
 roseatus, 70.
 spinoletta japonicus, 69.
arcuata, *Emberiza*, 81.
 Emberiza fucata, 81.
Ardea nigra, 7.
Ardeidae, 6.
Ardeola bacchus, 6.
argyrophrys, *Carpodacus*, 75, 76.
armandi, *Abrornis*, 64.
 Oreopneuste, 64.
artatus, *Parus major*, 31.
astigma, *Muscicapula superciliaris*, 68.
atrogularis, *Turdus*, 59.
auroreus, *Phoenicurus*, 56.
austrina, *Columba rupestris*, 3, 15.

Babax lanceolatus lanceolatus, 34.
 lanceolatus bonvaloti, 34.
Babbling thrushes, 33.
bacchus, *Ardeola*, 6.
 Buphus, 6.
bakeri, *Cuculus canorus*, 16, 17.
 Pomatorhinus ruficollis, 37.
bambuseti, *Conostoma aemodium*, 27.
beavani, *Lophophanes*, 29.
 Periparus rufonuchalis, 29.
beicki, *Cinclus cinclus*, 47.
 Phoenicurus schisticeps, 57.
 Prunella rubeculoides, 50.
bengalensis, *Alcedo*, 20.
 Alcedo atthis, 20.
berezowskii, *Anthus hodsoni*, 70.
berthemyi, *Dryonastes*, 35, 36.
bieti, *Fulvetta vinipecta*, 40, 41.
 Ianthocincla, 33.
blythi, *Trochalopteron affinis*, 38.
bonvaloti, *Acredula*, 29.
 Aegithaliscus, 29.
 Babax lanceolatus, 34.

- Bradypterus phoenicuroides*, 54.
brandti, *Leucosticte*, 80.
brevirostris, *Chibia*, 25.
 Chibia hottentota, 25.
brunnea, *Larvivora*, 53.
 Larvivora brunnea, 53.
Bubulcus ibis coromandus, 7.
Budytes citreola calcarata, 71.
 citreola citreola, 71.
 citreola weigoldi, 71.
Bulbuls, 46.
Buphus bacchus, 6.

Cacomantis merulinus querulus, 17.
 querulus, 17.
caeruleus, *Myophonus caeruleus*, 52.
Calamanthella tinnabulans, 61.
Calandrella brachydactyla dukhunen-
 sis, 24.
calcarata, *Budytes citreola*, 71.
Calliope tschebaiewi, 59.
calochrysea, *Culicicapa ceylonensis*, 66.
Campephagidae, 25.
canaster, *Suthora unicolor*, 27.
Canceroma coromanda, 7.
canifrons, *Spizixos*, 47.
Capella solitaria, 14.
carnipes, *Coccothraustes*, 74.
 Mycerobas, 74.
Carpodacus argyrophrys, 75, 76.
 davidianus, 76.
 dubius var. *minor*, 77.
 edwardsii saturatus, 77.
 eos, 75.
 erythrinus, 75.
 erythrinus murati, 75.
 erythrinus roseatus, 75.
 femininus, 76.
 laetissimus, 75.
 murati, 75.
 pulcherrimus, 76.
 ripponi, 77.
 rubicilloides, 77.
 rubicilloides rubicilloides, 77.
 saturatus, 77.
 thura femininus, 76.
 trifasciatus, 78.
 verreauxii, 77.
 vinaceus, 78.
Casarea ferruginea, 7.
cashmeriensis, *Cinclus cinclus*, 47.
 Delichon, 24.
 Delichon urbica, 24.
caspica, *Motacilla cinerea*, 71.
caspius, *Parus*, 71.
castaneus, *Turdus*, 60.
catharia, *Prinia*, 61.
 Suya crinigera, 61.
caudacutus, *Hirundapus*, 19.
Cerchneis tinnunculus interstinctus, 8,
 9.
 tinnunculus saturatus, 9,
Certhia familiaris khamensis, 33.
 himalayana yunnanensis, 32.
 khamensis, 33.
 yunnanensis, 32.
Certhiidae, 32.

cerviniventris, *Digenea*, 68.
 Digenea tricolor, 68.
Chaetura nudipes, 19.
Chaimarrhornis leucocephala, 56.
Chalcites maculatus maculatus, 18.
Charadriidae, 13.
Charadrius dubius, 13.
 dubius dubius, 13.
 fulvus, 13.
 placidus, 13.
Chelidorynx hypoxantha, 68.
Chibia brevisrostris, 25.
 hottentota brevisrostris, 25.
Chrysolophus amherstiae, 12.
Chrysomitris ambigua, 80.
chrysotis, *Lioparus*, 41.
Cichloselys sibiricus sibiricus, 59.
Ciconia nigra, 7.
Ciconiidae, 7.
Cinclidae, 47.
Cinclus cinclus beicki, 47.
 cinclus cashmeriensis, 47.
 cinclus szetschwanensis, 48.
 pallasii souliei, 47.
 pallasii var. *souliei*, 47.
Cisticola juncidis cursitans, 61.
citreola, *Budytes citreola*, 71.
 Motacilla, 71.
clarkei, *Ithaginis*, 10.
 Ithaginis cruentus, 10.
claudiae, *Acanthopneuste trochiloides*,
 64.
 Phylloscopus reguloides, 64.
clementii, *Iyngipicus pygmaeus*, 22.
 Yungipicus scintiliceps, 22.
Coccothraustes carnipes, 74.
 melanoxanthus, 74.
coelicolor, *Grandala*, 53.
coelivox, *Alauda*, 24.
 Alauda gulgula, 24.
Collocalia inopina pellos, 19.
 lowi pellos, 19.
Collurio tephronotus, 72.
Coloews dauricus khamensis, 26.
 fuscicollis, 26.
Columba hodgsonii, 15.
 humilis, 15.
 leuconota gradaria, 15.
 leucozonura, 16.
 rupestris austrina, 3, 15.
 rupestris rupestris, 16.
 taczanowskii, 16.
Columbidae, 14.
Colymbidae, 6.
Conostoma aemodium aemodium, 27.
 aemodium bambuseti, 27.
 aemodium, 27.
Cormorants, 6.
coromanda, *Canceroma*, 7.
coromandus, *Bubulcus ibis*, 7.
Corvidae, 25.
Corvus erythrorhynchus, 26.
 fuscicollis, 26.
 neglectus, 26.
Cranes, 12.
crecca, *Anas*, 8.
 Nettion crecca.

- Creepers, 32.
 Crossoptilon crossoptilon, 12.
 drouynii, 12.
 Crows, 25.
 Cryptolopha burkii distincta, 62.
 burkii valentini, 63.
 dejeani, 61.
 Cuckoos, 16.
 Cuckoo-shrikes, 25.
 Cuculidae, 16.
 Cuculus canorus bakeri, 16, 17.
 canorus telephonus, 17.
 optatus, 16, 17.
 sparverioides, 17.
 Culicicapa ceylonensis calochrysea, 66.
 ceylonensis orientalis, 66.
 cursitans, Cisticola juncidis, 61.
 Prinia, 61.
 cyanophrys, Suthora fulvifrons, 28.
 Cyornis rubeculoides glaucicomans, 66.
 tickelliae glaucicomans, 66.

 dabryii, Aethopyga dabryii, 73.
 Nectarinia, 73.
 Dafila acuta acuta, 7.
 darjellensis, Dryobates, 21.
 davidianus, Carpodacus, 76.
 dedekensi, Pomatorhinus erythrogegens, 37.
 Pomatorhinus maclellandi var., 37.
 dejeani, Cryptolopha, 61.
 Oligura castaneocoronata, 61.
 Parus, 30.
 Penthestes palustris, 30.
 Delichon cashmeriensis, 24.
 urbica cashmeriensis, 24.
 denotata, Niltava sundara, 67.
 derbiana, Palaeornis, 18.
 Psittacula, 18.
 desgodinsi, Lioptila, 43.
 Sibia, 43.
 desmursi, Dryobates darjellensis, 21.
 diademata, Yuhina, 45.
 Yuhina diademata, 45.
 Dicaeidae, 73.
 Dicaeum ignipectum ignipectum, 73.
 Dieruridae, 25.
 Dierurus leucophaeus nigrescens, 25.
 nigrescens, 25.
 Digenea cerviniventris, 68.
 tricolor cerviniventris, 68.
 Dippers, 47.
 distincta, Cryptolopha burkii, 62.
 distinctus, Seicurus burkii, 62.
 Doves, 14.
 Drongos, 25.
 drouynii, Crossoptilon, 12.
 Dryobates darjellensis, 21.
 darjellensis desmursi, 21.
 major stresemanni, 21.
 pygmaeus omissus, 22.
 semicoronatus szetschuanensis, 22.
 Dryocopus forresti, 20.

 Dryonastes albosuperciliaris, 35.
 berthemyi, 35, 36.
 berthemyi ricinus, 3, 35.
 pocilorhynchus, 36.
 sannio, 35.
 dubius, Charadrius, 13.
 Charadrius dubius, 13.
 Ducks, 7.
 dukhunensis, Alauda, 24.
 Calandrella brachydactyla, 24.
 Dumeticola thoracica thoracica, 62.

 eidos, Pomatorhinus ruficollis, 36.
 elegans, Phasianus, 12.
 Phasianus colchicus, 12.
 elegantula, Emberiza, 81.
 Emberiza elegans, 81.
 elliotii, Trochalopteron, 37.
 Trochalopteron elliotii, 37.
 Emberiza arcuata, 81.
 elegans elegantula, 81.
 elegantula, 81.
 fucata arcuata, 81.
 godlewskii yunnanensis, 81.
 melanops, 81.
 pusilla, 81.
 spodocephala melanops, 81.
 yunnanensis, 81.
 Enicrurus leschenaulti sinensis, 72.
 sinensis, 72.
 Enicuridae, 72.
 eos, Carpodacus, 75.
 Erythrina, 75.
 eous, Garrulax albogularis, 3, 34.
 Erythrina eos, 75.
 erythrinus, Carpodacus, 75.
 erythrorhyncha, Urocissa erythrorhyn-
 cha, 26.
 erythrorhynchus, Corvus, 26.
 ethologus, Pericrocotus brevirostris, 25.
 eugenei, Myiophoneus, 52.
 Myiophoneus, 52.
 eunomus, Turdus, 59.
 Eumyias thalassina thalassina, 66.
 eurhinus, Totanus totanus, 13.
 exyunnanensis, Garrulax elliotii, 38.

 Falco aesalon lymani, 9.
 interstinctus, 8.
 nisosimilis, 8.
 regulus lymani, 9.
 saturatus, 9.
 Falconidae, 8.
 Falcons, 8.
 femininus, Carpodacus, 76.
 Carpodacus thura, 76.
 ferruginea, Anas, 7.
 Casarca, 7.
 Hemichelidon, 69.
 finschi, Palaeornis, 18.
 Psittacula schisticeps, 18.
 florentes, Grandala coelicolor, 52, 53.
 Flower-peckers, 73.
 Flycatchers, 66.

- Fork-tails, 72.
 formaster, *Heteroxenicus cruralis*, 51, 52
 forresti, *Dryocopus*, 20.
 Fulvetta chrysotis, 41.
 Lioparus swinhoii, 41.
 Reguloides proregulus, 65.
 Streptopelia chinensis, 15.
 Thriponax, 20.
Fregilus himalayanus, 26.
Fringalauda nemoricola, 80.
 nemoricola nemoricola, 80.
Fringilla montifringilla, 81.
 Fringillidae, 74.
frontalis, *Phoenicurus*, 57.
 Phoenicurus, 57.
fuliginosa, *Phoenicurus*, 55.
 Ryacornis fuliginosa, 55.
fuligula, *Nyroca*, 7.
Fulvetta chrysotis forresti, 41.
 insperata, 3, 39.
 manipurensis, 40.
 ruficapilla, 40.
 ruficapilla sordidior, 39, 40.
 striaticollis yunnanensis, 39.
 vinipecta bieti, 40, 41.
 vinipecta vinipecta, 40, 41.
fulvifrons, *Suthora fulvifrons*, 28.
fulvus, *Charadrius*, 13.
 Pluvialis dominicus, 13.
funnebris, *Picoides*, 20.
fusca, *Prunella rupeculoides*, 50.
fusca, *Phaeorhadina fusca*, 63.
fuscicollis, *Coloeus*, 26.
 Corvus, 26.

Gallinago solitaria, 14.
Garrulax albogularis albogularis, 34.
 albogularis eous, 3, 34.
 albogularis lactus, 35.
 elliottii exyunnanensis, 38.
Garrulus bispecularis sinensis, 26.
 sinensis, 26.
Gecinus sordidior, 23.
genestieri, *Alcippe*, 42.
 Schoeniparus dubius, 42.
geoffroyi, *Ithaginis*, 10.
 Ithaginis cruentus, 10.
giganteus, *Lanius*, 72.
 Lanius sphenocercus, 72.
glareola, *Rhyacophilus*, 14.
 Tringa, 14.
glaucicomans, *Cyornis rubeculoides*, 66.
 Cyornis tickelliae, 66.
glaucogularis, *Aegithalos glaucogularis*,
 29.
godlewskii, *Agrodroma*, 70.
 Anthus richardi, 70.
gouldii, *Turdus*, 60.
gradaria, *Columba leucanota*, 15.
Grandala coelicolor, 53.
 coelicolor florentes, 52, 53.
grandis, *Phoenicurus erythrogaster*, 56.
 Grebes, 6.
griseotincta, *Yuhina gularis*, 45.
 Grouse, 9.
 Gruidae, 12.
Grus nigricollis, 12.
 Gulls, 14.

Halcyon pileata, 19.
Haliaetus lineatus, 8.
haringtoni, *Oreicola ferrea*, 58.
 Rhodophila ferrea, 58.
 Hawks, 8.
hellmayri, *Penthestes palustris*, 30.
Hemichelidon ferruginea, 69.
 sibirica rothschildi, 68.
henrici, *Leptopoeile*, 65.
 Tetraogallus, 11.
 Tetraogallus tibetanus, 11.
 Herons, 6.
Hesperiphona affinis, 74.
Heteroxenicus cruralis formaster, 51, 52.
 cruralis laurentei, 51.
 sinensis, 51, 52.
Hierococyx sparverioides, 17.
himalayanus, *Fregilus*, 26.
 Pyrhocorax pyrrhocorax, 26.
himalayensis, *Loxia*, 79.
 Loxia curvirostra, 79.
Hirundapus caudacutus, 19.
 nudipes, 19.
 Hirundinidae, 24.
Hirundo pacifica, 19.
 rupestris, 24.
hodgsoni, *Anthus*, 69.
 Phoenicurus, 57.
 Poliomyias, 68.
 Ruticilla, 57.
 Siphia, 68.
hodgsonii, *Columba*, 15.
Hodgsonius phoenicuroides phoenicuroides, 54.
Horeites brunnifrons umbraticus, 62.
Horornis acanthizoides acanthizoides,
 62.
 major, 62.
humii, *Pyrhospiza punicea*, 78.
humilis, *Columba*, 15.
 Oenopopelia tranquebarica, 15.
hyperythrus, *Picus*, 21.
 Hypopicus hyperythrus, 21.
hypoleucos, *Actitis*, 13.
 Tringa, 13.
Hypopicus hyperythrus hyperythrus,
 21.
 hyperythrus subrufinus, 21.
hypoxantha, *Chelidorynx*, 68.
 Rhipidura, 68.

Ianthia indica indica, 54.
 indica yunnanensis, 54.
 practica, 53.
 rufilata practica, 53.
Ianthocincla bieti, 33.
 maxima, 33.
ignipectum, *Dicaeum ignipectum*, 73.
ignipectus, *Myzanthus*, 73.
ignotincta, *Minla ignotincta*, 44.
immaculata, *Prunella*, 50.
immaculatus, *Accentor*, 50.
immansuetus, *Myophonus caeruleus*,
 52.
indica, *Ianthia indica*, 54.
insperata, *Fulvetta*, 3, 39.
intensicolor, *Procarduelis nipalensis*, 74

- intensior*, *Passer rutilans*, 82.
Propyrrhula subhimachala, 79.
intermedia, *Yuhina nigrimentum*, 45.
intermedius, *Schoeniparus*, 42.
interstinctus, *Cerchneis tinnunculus*,
 8, 9.
Falco, 8
Ithaginis clarkei, 10.
cruentus clarkei, 10.
cruentus geoffroyi, 10.
geoffroyi, 10.
wilsoni, 10.
Iyngipicus pygmaeus clementii, 22.
japonicus, *Anthus pratensis*, 69.
Anthus spinoletta, 69.
jerdoni, *Minla*, 43.
Minla ignotincta, 43, 44.
kessleri, *Merula*, 60.
Turdus, 60.
khamensis, *Certhia*, 33.
Certhia familiaris, 33.
Coloeus dauuricus, 26.
Otocoris alpestris, 23.
Otocorys elwesi, 23.
Kingfishers, 19.
laetissimus, *Carpodacus*, 75.
laetus, *Garrulax albogularis*, 35.
Laiscopus collaris ripponi, 49.
lanceolatus, *Babax lanceolatus*, 34.
Laniidae, 72.
Lanius giganteus, 72.
sphenocercus giganteus, 72.
sphenocercus sphenocercus, 72.
tephronotus, 72.
Laridae, 14.
Larks, 23.
Larus affinis taimyrensis, 14.
fuscus taimyrensis, 14.
ridibundus sibiricus, 14.
Larvivora brunnea, 53.
brunnea brunnea, 53.
laurentei, *Heteroxenicus cruralis*, 51.
Leptopoeile henrici, 65.
obscura, 65.
sophiae, 66.
sophiae obscura, 65.
Lerwa lerwa lerwa, 11.
lerwa major, 10.
leucocephala, *Chaimarrhornis*, 56.
Phoenicura, 56.
leucocephalus, *Microscelis*, 46.
Turdus, 46.
leucopsis, *Motacilla*, 71.
Motacilla lugubris, 71.
leucopterus, *Phoenicurus aureus*, 56.
Leucosticte brandti, 80.
walteri, 80.
leucozonura, *Columba*, 16.
leucura, *Muscisylvia*, 55.
Notodela leucura, 55.
lineatus, *Haliaetus*, 8.
Milvus, 8.
Lioparus chrysotis, 41.
swinhoii, 41.
swinhoii forresti, 41.
swinhoii swinhoii, 41.
Lioptila desgodinsi, 43.
Liothrix luteus luteus, 44.
luteus yunnanensis, 44.
Localities, list of, 3.
longirostris, *Pyrrhospiza punicea*, 78, 79.
Lophophanes beavani, 29.
dichrous wellsi, 30.
Loxia curvirostra himalayensis, 79.
himalayensis, 79.
lugubris, *Phylloscopus*, 64.
luteus, *Liothrix luteus*, 44.
lymani, *Falco aesalon*, 9.
Falco regulus, 9.
macella, *Nucifraga caryocatactes*, 25.
Nucifraga hemispila, 25.
maculatus, *Chalcites maculatus*, 18.
Pipastes, 69.
Trogon, 18.
magna, *Sitta*, 32.
magnirostris, *Phylloscopus*, 64.
major, *Horornis*, 62.
Lerwa lerwa, 10.
manipurensis, *Fulvetta*, 40.
mariae, *Minla ignotincta*, 43, 44.
maxima, *Ianthocincla*, 33.
maximus, *Phoenicurus erythrogaster*,
 56.
Pterorhinus, 33.
Mecistura vinacea, 28.
melanops, *Emberiza*, 81.
Emberiza spodocephala, 81.
melanoschistus, *Accipiter*, 8.
Accipiter nisus, 8.
melanoxanthus, *Coccothraustes*, 74.
Mycerobas, 74.
melanozantha, *Pachyglossa*, 73.
Mergus merganser orientalis, 7
orientalis, 7.
Merula kessleri, 60.
meyeri, *Pucrasia*, 11.
Micropodidae, 19.
Micropus pacificus pacificus, 19.
Microscelis leucocephalus, 46.
Milvus lineatus, 8.
Minla ignotincta ignotincta, 44.
ignotincta jerdoni, 43, 44.
ignotincta mariae, 43, 44.
ignotincta sini, 44.
jerdoni, 43.
minor, *Carpodacus dubius* var., 77.
mollissima, *Oreocincla mollissima*, 59.
mollissimus, *Turdus*, 59.
Monticola solitaria pandoo, 58.
Montifringilla brandti walteri, 80.
montifringilla, *Fringilla*, 81.
Motacilla affinis, 63.
alboides, 71.
cinerea caspica, 71.
citrcola, 71.
citrcola weigoldi, 71.

- Motacilla, leucopsis, 71.
 lugubris alboides, 71.
 lugubris leucopsis, 71.
 leucopsis, 71.
 Motacillidae, 69.
 Moupinia poecilotis poecilotis, 42.
 poecilotis sordidior, 42.
 multistriata, Prunella strophhiata, 50.
 multistriatus, Accentor, 50.
 muraria, Tichodroma, 33.
 murati, Carpodacus, 75.
 Carpodacus erythrinus, 75.
 Muscicapa albicilla, 68.
 thalassina, 66.
 Muscicapidae, 66.
 Muscicapula superciliaris astigma, 68.
 Muscisylvia leucura, 55.
 Mycerobas carnipes, 74.
 melanoxanthus, 74.
 Myiophoneus eugenei, 52.
 Myophonon caeruleus caeruleus, 52.
 caeruleus immansuetus, 52.
 eugenei, 52.
 temminckii, 52.
 Myzanthe ignipectus, 73.

 Nannus troglodytes szetschuanus, 49.
 troglodytes talifuensis, 49.
 nebulosa, Sitta europaea, 32.
 Sitta sinensis, 32.
 Nectarinia dabryi, 73.
 Nectariniidae, 73.
 neglectus, Corvus, 26.
 nemoricola, Fringalauda, 80.
 Fringalauda nemoricola, 80.
 Nettion crecca crecca, 8.
 nigra, Ardea, 7.
 Ciconia, 7.
 nigrescens, Dicrurus, 25.
 Dicrurus leucophaeus, 25.
 nigricollis, Grus, 12.
 Podiceps, 6.
 Proctopus nigricollis, 6.
 nigrimentum, Yuhina nigrimentum, 45.
 Niltava sundara denotata, 67.
 nisosimilis, Accipiter nisus, 8.
 Falco, 8.
 Notodela leucura leucura, 55.
 Nucifraga caryocatactes macella, 25.
 hemispila macella, 25.
 nudipes, Chaetura, 19.
 Hirundapus, 19.
 Nuthatches, 31.
 nyroca, Anas, 7.
 Nyroca fuligula, 7.
 nyroca nyroca, 7.

 obscura, Leptopocile, 65.
 Leptopocile sophiae, 65.
 Sitta europaea, 32.
 obscurior, Yuhina occipitalis, 45.
 obscurus, Turdus, 60.
 ochropus, Tringa, 13.
 Oenopopelia tranquebarica humilis, 15.
 Oligura castaneocoronata dejeani, 61.

 olivaceus, Schoeniparus brunneus, 42.
 omeiensis, Yuhina gularis, 45.
 omissus, Yungipicus scintilliceps, 22.
 optatus, Cuculus, 16, 17.
 Oreicola ferrea haringtoni, 58.
 Oreocincla mollissima mollissima, 59.
 Oreopneuste armandi, 64.
 subaffinis, 63.
 orientalis, Culicicapa ceylonensis, 66.
 Mergus, 7.
 Mergus merganser, 7.
 Orioles, Old World, 25.
 Oriolidae, 25.
 Oriolus chinensis tenuirostris, 25.
 tenuirostris, 25.
 Ospreys, 8.
 Otocoris alpestris khamensis, 23.
 alpestris przewalskii, 23.
 Otocorys elwesi khamensis, 23.
 oustaleti, Trochalopteron affinis, 38.

 Pachyglossa melanozantha, 73.
 pacifica, Hirundo, 19.
 pacificus, Micropus pacificus, 19.
 Palaeornis derbiana, 18.
 finschi, 18.
 pallidus, Alлотrius xanthochloris var., 44.
 Pteruthius xanthochloris, 44.
 pandoo, Monticola solitaria, 58.
 Petrocincla, 58.
 Paradisea tristis, 73.
 Paradoxornithidae, 27.
 Paridae, 28.
 Parrot-bills, 27.
 Parrots, 18.
 Parus aemodius, 30.
 caspicus, 71.
 dejeani, 30.
 dichrous wellsi, 30.
 major artatus, 31.
 major tibetanus, 31.
 monticolus yunnanensis, 31.
 Passer rutilans intensor, 82.
 Pelecanus sinensis, 6.
 pellos, Collocalia inopina, 19.
 Collocalia lowi, 19.
 Penthestes palustris dejeani, 30.
 palustris hellmayri, 30.
 superciliosa, 31.
 Perdix hodgsoniae sifanica, 9.
 sifanica, 9.
 Pericrocotus brevirostris ethologus, 25.
 Periparus ater aemodius, 30.
 rufinuchalis beavani, 29.
 Perissospiza affinis, 74.
 Petrocincla pandoo, 58.
 Phaeorhadinia affinis, 63.
 fuscata fuscata, 63.
 fuscata robusta, 63.
 subaffinis, 63.
 Phalacrocoracidae, 6.
 Phalacrocorax carbo sinensis, 6.
 Phasianidae, 9.
 Phasianus amherstiae, 12.
 colchicus elegans, 12.
 Pheasants, 9.

- Phoenicura frontalis*, 57.
 fuliginosa, 55.
 leucocephala, 56.
phoenicuroides, *Bradypterus*, 54.
 Hodgsonius phoenicuroides, 54.
Phoenicurus aureus, 56.
 aureus leucopterus, 56.
 erythrogaster grandis, 56.
 erythrogaster maximus, 56.
 frontalis, 57.
 frontalis sinæ, 58.
 hodgsoni, 57.
 schisticeps, 57.
 schisticeps beicki, 57.
Phylloscopus fuscatus robustus, 63.
 lugubris, 64.
 magnirostris, 64.
 pulcher, 65.
 reguloides claudiae, 64.
 trochiloides, 64.
Picidae, 20.
Picoides funebris, 20.
Picus canus setschuanus, 23.
 canus sordidior, 23.
 hyperythrus, 21.
pileata, *Alcedo*, 19.
 Halcyon, 19.
Pipastes maculatus, 69.
Pisobia temminckii, 13.
placidus, *Charadrius*, 13.
platyrhyncha, *Anas platyrhyncha*, 8.
platyrhynchos, *Anas*, 8.
Platyrhynchus albicollis, 69.
Plovers, 13.
Pluvialis dominicus fulvus, 13.
Podiceps nigricans poggei, 6.
 nigricollis, 6.
Poecile superciliosa, 31.
poecilorhynchus, *Dryonastes*, 36.
poecilotis, *Moupinia poecilotes*, 42.
poggei, *Podiceps nigricans*, 6.
 Poliocephalus ruficollis, 6.
Poliocephalus ruficollis poggei, 6.
Poliomyias hodgsoni, 68.
Pomatorhinus erythrogenys dedekensi, 37.
 maclellandi var. *dedekensi*, 37.
 ruficollis bakeri, 37.
 ruficollis eidos, 36.
 ruficollis similis, 36, 37.
practica, *Ianthia*, 53.
 Ianthia rufilata, 53.
Pratincola maura var. *przewalskii*, 58.
 rubicola stejnegeri, 58.
Prinia catharia, 61.
 cursitans, 61.
Procarduelis nipalensis intensicolor, 74.
 rubescens saturator, 74.
Proctopus nigricollis nigricollis, 6.
Propasser ripponi, 77.
 verreauxii, 77.
Propyrrhula subhimachala intensior, 79.
Prunella collaris ripponi, 49.
 immaculata, 50.
 rubeculoides beicki, 50.
 rubeculoides fusca, 50.
 strophata multistriata, 50.
Prunellidae, 49.
przewalskii, *Otocoris alpestris*, 23.
 Pratincola maura var., 58.
 Saxicola torquata, 58.
Psittacidae, 18.
Psittacula derbiana, 18.
 schisticeps finschi, 18.
Pterorhinus maximus, 33.
Pteruthius aeralatus ricketti, 44.
 ricketti, 44.
 xanthochloris pallidus, 44.
Ptyonoprogne rupestris, 24.
Pucrasia meyeri, 11.
pulcher, *Phylloscopus*, 65.
 Reguloides pulcher, 65.
pulcherrimus, *Carpodacus*, 76.
punicea, *Pyrrhospiza punicea*, 78.
pusilla, *Emberiza*, 81.
Pycnonotidae, 46.
Pycnonotus xanthorhous, 47.
Pyrrhocorax pyrrhocorax himalayanus, 26.
Pyrrhospiza punicea humii, 78.
 punicea longirostris, 78, 79.
 punicea punicea, 78.
 punicea szetschuana, 78, 79.
Pyrrhula erithaca altera, 79.
 quarta, *Yuhina nigrimentum*, 45.
querquedula, *Anas*, 7.
Querquedula querquedula, 7.
querulus, *Cacomantis*, 17.
 Cacomantis merulinus, 17.
Reguloides proregulus forresti, 65.
 pulcher pulcher, 65.
 pulcher vegetus, 65.
Regulus regulus yunnanensis, 65.
Rhipidura albicollis albicollis, 69.
 hypoxantha, 68.
Rhodophila ferrea haringtoni, 58.
Rhyacophilus glareola, 14.
richardi, *Anthus richardi*, 70.
richardsi, *Thriponax*, 20.
ricinus, *Dryonastes berthemyi*, 3, 35.
ricketti, *Pteruthius*, 44.
 Pteruthius acralatus, 44.
 Suthora webbiana, 28.
riponi, *Carpodacus*, 77.
 Laiscopus collaris, 49.
 Propasser, 77.
 Prunella collaris, 49.
robusta, *Phacorhadina fuscata*, 63.
robustus, *Phylloscopus fuscatus*, 63.
rocki, *Spelaeornis*, 3, 48, 49.
roseatus, *Anthus*, 70.
 Carpodacus erythrinus, 75.
rothschildi, *Hemichelidon sibirica*, 68.
rubicilloides, *Carpodacus*, 77.
 Carpodacus rubicilloides, 77.
ruficapilla, *Fulvetta*, 40.
ruficollis, *Turdus*, 60.
rupestris, *Columba rupestris*, 16.
 Hirundo, 24.
 Ptyonoprogne, 24.
rusticola, *Scolopax*, 14.
 Scolopax rusticola, 14.

- Ruticilla hodgsoni*, 57.
 schisticeps, 57.
Ryacornis fuliginosa fuliginosa, 55.

sannio, *Dryonastes*, 35.
saturator, *Procarduelis rubescens*, 74.
saturatus, *Carpodacus*, 77.
 Carpodacus edwardsii, 77.
 Cerchneis tinnunculus, 9.
 Falco, 9.
Saxicola torquata przewalskii, 58.
 torquata stejnegeri, 58.
schisticeps, *Phoenicurus*, 57.
 Ruticilla, 57.
Schoeniparus brunneus olivaceus, 42.
 dubius genestieri, 42.
 intermedius, 42.
Scolopacidae, 13.
Scolopax rusticola, 14.
 rusticola rusticola, 14.
secunda, *Tetrastes sewerzowi*, 9.
Seiurus burkii distinctus, 62.
 burkii valentini, 63.
setschuanus, *Picus canus*, 23.
Shrikes, 72.
Sibia desgodinsi, 43.
sibiricus, *Cichloselys sibiricus*, 59.
 Larus ridibundus, 14.
 Turdus, 59.
sifanica, *Perdix*, 9.
 Perdix hodgsoniae, 9.
similis, *Pomatorhinus ruficollis*, 36, 37.
simplex, *Zosterops*, 74.
 Zosterops palpebrosa, 74.
sinae, *Phoenicurus frontalis*, 58.
sinensis, *Enicurus*, 72.
 Enicurus leschenaulti, 72.
 Garrulus, 26.
 Garrulus bispecularis, 26.
 Heteroxenicus, 51, 52.‡
 Pelecanus, 6.
 Phalacrocorax carbo, 6.
sini, *Minla ignotincta*, 44.
Siphia hodgsoni, 68.
 parva albicilla, 68.
 strophciata, 67.
Sitta europaea nebulosa, 32.
 europaea obscura, 32.
 magna, 32.
 sinensis nebulosa, 32.
 villosa, 32.
 yunnanensis, 31.
Sittidae, 31.
Siva cyanouroptera wingatei, 43.
 strigula yunnanensis, 43.
 wingatei, 43.
Snipe, 13.
solitaria, *Capella*, 14.
 Gallinago, 14.
sophiae, *Leptopoeile*, 66.
sordidior, *Fulvetta ruficapilla*, 39, 40.
 Gecinus, 23.
 Moupinia poecilotis, 42.
 Picus canus, 23.
 Yuhina gularis, 45.
souliei, *Cinclus pallasii*, 47.
 Cinclus pallasii var., 47.

souliei, *Spelaornis*, 48, 49.
Sparrows, 74.
sparverioides, *Cuculus*, 17.
 Hierococcyx, 17.
Spelaornis rocki, 3, 48, 49.
 souliei, 48, 49.
sphenocercus, *Lanius sphenocercus*, 72.
Sphenurus sphenurus yunnanensis, 14.
Spinus ambiguus, 80.
Spizixos canifrons, 47.
Starlings, 73.
stejnegeri, *Pratincola rubicola*, 58.
 Saxicola torquata, 58.
Storks, 7.
Streptopelia chinensis forresti, 15.
stresemanni, *Dryobates major*, 21.
strophciata, *Siphia*, 67.
Sturnidae, 73.
styani, *Suthora webbiana*, 28.
 Trochalopteron, 39.
subaffinis, *Oreopneuste*, 63.
 Phaeorhadina, 63.
subrufinus, *Hypopicus hyperythrus*, 21.
Sun-birds, 73.
superciliosa, *Penthestes*, 31.
 • *Poecile*, 31.
Suthora fulvifrons cyanophrys, 28.
 fulvifrons fulvifrons, 28.
 unicolor canaster, 27.
 webbiana ricketti, 28.
 webbiana styani, 28.
Suya crinigera catharia, 61.
 crinigera yunnanensis, 61.
Swallows, 24.
Swifts, 19.
swinhoii, *Lioparus*, 41.
 Lioparus swinhoii, 41.
Sylviidae, 61.
szechenyii, *Tetraophasis*, 11.
szetschuana, *Pyrrhospiza punicea*, 78, 79.
szetschuanensis, *Dryobates semicoronatus*, 22.
szetschuanus, *Nannus troglodytes*, 49.
szetschwanensis, *Cinclus cinclus*, 48.

taczanowskii, *Columba*, 16.
taimyrensis, *Larus affinis*, 14.
 Larus fuscus, 14.
talifuensis, *Aegithaliscus concinnus*, 29.
 Anorthura, 49.
 Nannus troglodytes, 49.
Tarsiger chrysaeus vitellinus, 55.
 indicus yunnanensis, 54.
telephonus, *Cuculus canorus*, 17.
temminckii, *Myophonus*, 52.
 Pisobia, 13.
 Tringa, 13.
tenuirostris, *Oriolus*, 25.
 Oriolus chinensis, 25.
tephronotus, *Collurio*, 72.
 Lanius, 72.
Tetraogallus henrici, 11.
 tibetanus henrici, 11.
 tibetanus tibetanus, 11.
Tetraonidae, 9.
Tetraophasis szechenyii, 11.
Tetrastes sewerzowi secunda, 9.

- thalassina, *Eumyias thalassina*, 66.
Muscicapa, 66.
 thoracica, *Dumeticola thoracica*, 62.
Thriponox forresti, 20.
 richardsi, 20.
 Thrushes, 51.
 babbling, 33.
 tibetanus, *Parus major*, 31.
 Tetraogallus tibetanus, 11.
Tichodroma muraria, 33.
 Timaliidae, 33.
 tinnabulans, *Calamanthella*, 61.
 Titmice, 28.
Totanus totanus eurhinus, 13.
trifasciatus, *Carpodacus*, 78.
Tringa glareola, 14.
 hypoleucos, 13.
 ochropus, 13.
 temminckii, 13.
 vanellus, 13.
 tristis, *Arcidotheres tristis*, 73.
 Paradisea, 73.
Trochalopteron affinis blythi, 38.
 affinis oustaleti, 38.
 elliottii, 37.
 elliottii elliotii, 37.
 elliottii yunnanense, 38.
 styani, 39.
 trochiloides, *Acanthiza*, 64.
 Phylloscopus, 64.
 Troglodytidae, 48.
Trogon maculatus, 18.
tschebaiewi, *Calliope*, 59.
 Turdidae, 51.
Turdus atrogularis, 59.
 castaneus, 60.
 eunomus, 59.
 gouldii, 60.
 kessleri, 60.
 leucocephalus, 46.
 mollissimus, 59.
 obscurus, 60.
 ruficollis, 60.
 sibiricus, 59.
 umbraticus, *Horeites brunnifrons*, 62.
Urocissa erythrorhyncha erythro-
rhyncha, 26.
 valentini, *Cryptolopha burkii*, 63.
 Seicurus burkii, 63.
 vanellus, *Tringa*, 13.
 Vanellus, 13.
Vanellus vanellus, 13.
 vegetus, *Reguloides pulcher*, 65.
 verreauxii, *Carpodacus*, 77.
 Propasser, 77.
 villosa, *Sitta*, 32.
 vinacea, *Aegithalos glaucogularis*, 28.
 Mecistura, 28.
 vinaceus, *Carpodacus*, 78.
 vinipecta, *Fulvetta vinipecta*, 40, 41.
 vitellinus, *Tarsiger chrysaeus*, 55.
 walteri, *Leucosticte*, 80.
 Montifringilla brandti, 80.
 Warblers, Old World, 61.
 weigoldi, *Alauda arvensis*, 24.
 Budytes citreola, 71.
 Motacilla citreola, 71.
 wellsii, *Lophophanes dichrous*, 30.
 Parus dichrous, 30.
 White-eyes, 74.
 wilsoni, *Ithaginis*, 10.
 wingatei, *Siva*, 43.
 Siva cyanouroptera, 43.
 Woodpeckers, 20.
 Wrens, 48.
 xanthorhous, *Pycnonotus*, 47.
 yangpiensis, *Yuhina gularis*, 45.
Yuhina ampelina, 46.
 diademata, 45.
 diademata diademata, 45.
 gularis griseotincta, 45.
 gularis gularis, 45.
 gularis omeiensis, 45.
 gularis sordidior, 45.
 gularis yangpiensis, 45.
 nigrimentum intermedia, 45.
 nigrimentum nigrimentum, 45.
 nigrimentum quarta, 45.
 occipitalis obscurior, 45.
Yungipicus scintilliceps clementii, 22.
 scintilliceps omissus, 22.
 yunnanense, *Trochalopteron elliotii*, 38.
 yunnanensis, *Alcippe fratercula*, 41. ♀
 Alcippornis nipalensis, 41.
 Anthus hodgsoni, 70.
 Certhia, 32.
 Certhia himalayana, 32.
 Emberiza, 81.
 Emberiza godlewskii, 81.
 Fulvetta striaticollis, 39.
 Ianthia indica, 54.
 Liothrix luteus, 44.
 Parus monticolus, 31.
 Regulus regulus, 65.
 Sitta, 31.
 Siva strigula, 43.
 Sphenurus sphenurus, 14.
 Suya criniger, 61.
 Tarsiger indicus, 54.
 Zosteropidae, 74.
Zosterops palpebroza simplex, 74.
 simplex, 74.